

JPRS-TTP-86-029

15 DECEMBER 1986

546-0541-87
83P
259C

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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15 DECEMBER 1986

WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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PEOPLES REPUBLIC OF CHINA

PRC COMMUNICATIONS OFFICIAL INTERVIEWED

Hong Kong SOUTH CHINA MORNING POST in English 3 Oct 86 Supplement p 2

[Article by Olivia Sin]

[Text] CHINA'S one billion people are served by only 6.3 million telephones.

Although Beijing leaders have designated telecommunications as a priority development area, the shortage of telephone sets is unlikely to be solved in this century.

According to the vice-director of the technical information centre of the Chinese Ministry of Posts and Telecommunications, Mr Xue Chunpei, the country plans to increase the total number of telephone sets to 10 million by 1990.

The figure will rise to 33.6 million sets by the year 2000, which will still be far from satisfying the needs of the ordinary public.

Mr Xue is a member of a high-level Chinese delegation now in Hongkong to promote a telecommunication exposition to be held in Beijing in April.

Few households in China have telephones, considered a general necessity in more developed countries.

It is, therefore, not surprising to find a Chinese village of hundreds of households sharing one telephone.

Comparatively speaking, the communications network is better developed in the major cities like Beijing, Shanghai, Guangzhou and Tianjin.

Mr Xue admitted that the development of telecommunications in the rural areas lags far behind the big cities.

It is understood that less than one-third of the 6.3 million telephone sets are in rural areas.

Nevertheless, he said to satisfy the needs of big cities, most of the extra 3.7 million telephone sets to be installed in the next five years will be in the coastal regions.

Apart from telephone sets, he said China will need more than 500,000 digital exchange lines in the next few years.

Sophisticated equipment like microwave stations, optical fibre links and satellite communication ground stations will also be needed.

Mr Xue said China is interested in forming joint ventures with foreign companies to develop advanced telecommunications equipment and techniques.

Among them are digital microwave systems, optical fibre communication equipment and postal sorting technology.

In addition, he said China is speeding up the development of longer distance communication links aimed at bridging the gap between the north and south.

For instance, he said large capacity digital microwave trunks will be built to facilitate communications between Beijing and Shanghai.

Long wave optical fibre trunks will be built to link up the major cities of Wuhan, Chongqing and Nanjing.

Mr Xue said a number of postal centres will be set up in provincial capitals to speed up mail services.

Another member of the delegation, Mr Luo Kang, said China will import advanced electronic components and technology to enhance its development in the industry, science and defence sectors.

Examples are radars, electronic warfare equipment and precision measuring instruments, he said.

VIETNAM

BRIEFS

THUAN HAI POSTAL SERVICE--The Thuan Hai provincial post and telegraph sector has put into operation a new telegraph network between Phan Rang City and Ninh Hai, Ninh Son, Ninh Phuoc and Tay Phong districts. The sector has also established a telex system between Phan Thiet and Phan Rang cities. [Summary] [Hanoi Domestic Service in Vietnamese 2300 GMT 23 Nov 86] /9604

MICROWAVE STATION BUILT IN VUNG TAU--The Vung Tau integrated microwave communications station has been officially put into operation. This station, built with Soviet assistance, is responsible for ensuring all types of communications between Vung Tau and other localities within the country and in the world. This station has received and relayed programs of the USSR's central television station to serve Soviet experts and Vietnamese cadres and people in Vung Tau. [Hanoi Domestic Service in Vietnamese 1430 GMT 24 Nov 86] /9604

CSO: 5500/4305

CANADA

CBC PRESIDENT JUNEAU ADDRESSES SEMINAR ON CANADIAN IDENTITY

Windsor THE WINDSOR STAR in English 6 Nov 86 p A6

[Article by Tom McMahon]

[Text]

Canadians could lose their distinctive identity without the CBC, says Pierre Juneau, the network's president.

"I don't think a country like Canada or any other country that I would call middle sized, and I include European countries, can maintain a strong identity now and in the future without a strong broadcasting system," Juneau said Tuesday in a telephone interview from his Ottawa headquarters.

"That certainly applies to Canada, which is close to the biggest and most powerful country in the world in terms of media."

Juneau is in Windsor today to address the annual Centre for Canadian-American Studies seminar at the University of Windsor on the impact of culture on Canadian identity.

"As I say in my speech, at some length, I am not saying that broadcasting and the CBC is the only thing that affects our identity. There are many things, starting with schools right up to universities. There are newspapers, magazines and many other things, but I think a strong broadcasting system is indispensable and there can't be a strong broadcasting system without the CBC."

That system has been under government attack for the last two years.

The federal government provides about 60 per cent of the CBC's annual budget of approximately \$1 billion. This year, the CBC received \$869 million from Parliament and raised more than \$200 million from advertising.

THE CBC AND Juneau, a Liberal appointee, have been on the firing line since the Conservative government came to power in the summer of 1984.

Since then, CBC has been the victim of a \$75-million budget cut that caused the elimination of 1,150 jobs. Another \$10 million earmarked for equipment was never offered. In Windsor, those cuts meant the elimination of approximately 60 full- and part-time jobs at Channel 9 and the end of all locally produced programming except the weekday news.

The fiscal year which ends next March 31 saw CBC get a \$22-million budget increase, but the corporation said that was \$48 million short of inflationary costs and meant the elimination of another 350 jobs as well as programming cuts.

CBC vice-president, Denis Harvey says because of the cuts and the indication there are more on the way, "It is hard not to develop a bunker mentality." But Juneau has remained cool under fire. He doesn't make a big deal of attacks on him by a government that wants his resignation because of his Liberal ties and his friendship with Pierre Trudeau.

He does resent any charges the corporation is elitist and wasteful. With an audience share of 22 per cent, similar to what the U.S. networks get in Canada, he feels CBC television programming appeals to a wide audience. On radio the share is eight to 10 per cent but with a fragmented audience he feels this, too, is a good performance.

What about wasteful?

"I THINK THAT is balderdash. It might have been true in the past but it certainly isn't true now. There is no government department that has laid off near the number that we have laid off in the last two years. We have eliminated 1,500 jobs."

The 64-year-old former head of the Canadian Radio-television and Telecommunications Commission (CRTC) has nearly three more years remaining on his seven-year contract that pays him more than \$100,000 a year. He's given every indication he intends to remain for the full term.

CBC did get a boost in September with the release of the Caplan-Sauvage report on broadcasting, which said CBC is underfunded and needs more money immediately. There is no word when or if the recommendations will be implemented.

"The minister has reacted rather positively to the report. The problem has been to what extent and when."

In the meantime, the latest obstacle to his presidency came last month when it was announced that thanks to a new \$3.5-million computerized accounting system, the auditor general couldn't figure out the CBC's books and couldn't account for \$57 million.

This produced another round of calls for Juneau's resignation by Tory MPs.

In a verbal and written presentation he listed the following options while noting the CBC doesn't have the authority to decide what services should be dropped.

- Cut Canadian content to 50 per cent from 60, at a saving of \$50 million. It costs about one tenth of the price to buy a U.S. show as it does to make a Canadian one. That means an episode of Dallas can be bought for between \$40,000 and \$50,000 while an hour of Canadian drama will cost between \$100,000 and \$500,000 to make.

- Eliminate the CBC-FM service known as CBC Stereo. That could save \$31 million.

- Drop the northern service which broadcasts in seven languages at a cost of \$12.5 million.

- Close a number of television stations including those in Cornerbrook, Nfld., Sydney, N.S., Saskatoon and Calgary at a saving of \$15.5 million.

- Let the external affairs department pay for the CBC shortwave service as recommended by a task force. That would save \$16.5 million.

Meanwhile, Communications Minister Flora MacDonald says Juneau is worrying needlessly because she sees the CBC as a strong and unifying force.

In a speech last weekend on the 50th anniversary of the CBC, she said, "I'd like to see it act even more as a great Canadian institution and a means of linkage in this country than it has been in the last 50 years."

Still, she isn't talking money, and Juneau warns, "We aren't Jesus Christ. We can't feed 10,000 people with two loaves of bread."

INTER-AMERICAN AFFAIRS

CONDOR SATELLITE FORESEEN FOR ANDEAN COUNTRIES

Lima EL COMERCIO in Spanish 15 Oct 86 p A-3

[Text] Next month vice ministers of communications from the Andean area are to meet in Quito, Ecuador. Among other topics, they are to discuss the possibility of developing a joint satellite named Condor in the very near future.

This announcement was made by the vice minister of communications of Peru, the engineer Juan Bartet Rosas, after opening the Fourth International Digital Telecommunications Engineering Course.

"We Need a Domestic Satellite"

At the end of the opening ceremony, Mr Bartet stated that the countries of the Andean area--Venezuela, Colombia, Ecuador, Peru, and Bolivia--want to make the Condor satellite project become a reality.

"We need a domestic satellite. With it the ground stations would be able to work at a much lower cost, and it would provide a solid boost for the integration of the nations of our region," he explained.

The Condor Satellite: 24 Channels and 600 Telephone Calls

Bartet noted that the biggest problem is its high cost, which is estimated at \$450 million. Therefore, it seems prudent to wait, "as advances come very rapidly in electronics," and at the end of a few years the investment might be a fraction of the original estimate.

He also said that studies done with funding from the EEC (European Economic Community) indicate that the project will not be viable until 1992.

The Condor system calls for the installation of one main satellite and another reserve satellite, plus ground control systems. It would have 24 carriers, each of which could retransmit one television channel or 600 simultaneous telephone communications.

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CSO: 5500/2008

BARBADOS

DESIGN TECHNICIANS BRING SATELLITE TV SERVICE CLOSER

Georgetown BARBADOS ADVOCATE in English 15 Oct 86 p 1

[Text] Barbadians will soon be able to rent equipment for receiving the new satellite television programmes.

This disclosure was made by Chairman of the Caribbean Broadcasting Corporation Professor Mickey Waldron yesterday.

Although the Chairman did not give details, he said that plans were progressing and that a number of overseas technicians had been brought in to assist in "some specific technical work on the antenna at Sturges, since such expertise was not available in Barbados."

Concerning the plans for construction of a new Headquarters for the Corporation, Professor Waldron said: "Plans have been discussed at Cabinet level and I expect the minister to make an announcement soon."

Additional Channels

Earlier this year it was announced that the Government had decided on two additional channels for its satellite T.V. service instead of the four for which the previous government had planned.

Meanwhile, Professor Waldron has termed as "news to me" a CANA news item which appeared in Monday's edition of the Barbados Advocate which stated that a ten-months-old news exchange between Trinidad and Tobago Television (TTT) and Barbados had been cancelled.

"This is the first time I have heard about the cancellation. I will have to make a check on it," he said.

The reason given for the cancellation was lack of funds.

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BELIZE

BRIEFS

PUP: TV ACCESS DENIED--Following reports that the Esquivel Government intends to severely restrict the P.U.P.'s access to T.V. during the current City Council elections campaign, the Party Chairman Mr. Said Musa has written to the Belize Broadcasting Authority for written confirmation of the Authority's frequently stated position that they will not hinder political broadcasts on T.V. in the context of a election. According to usually reliable sources the U.D.P. Government intends to depart from the practice established by the previous government of allowing all political parties unlimited access to T.V. during political campaigns. It is understood that the Government is considering limiting both the amount and the duration of political broadcasts by the P.U.P. and the period during which such broadcasts can be aired. There are even some suggestions that the Government may demand to see all broadcasts before allowing them to be aired. In effect the P.U.P. would be allowed to show a program on T.V. only if the U.D.P. sees the program in advance and agrees to show it. A copy of Mr. Musa's letter appears in this issue on page 6. [Text] [Belize City THE BELIZE TIMES in English 12 Oct 86] /13046

CSO: 5540/021

BERMUDA

NEW TELECOMMUNICATIONS LAWS TO TAKE EFFECT IN 1987

Hamilton THE ROYAL GAZETTE in English 21 Oct 86 p 2

[Text]

Legislative Affairs Minister Sen. the Hon. Charles Collis yesterday said new telecommunications laws were expected to come into effect at the start of 1987.

A major reorganisation of legislation controlling telecommunications was approved by Parliament earlier this year when a new Telecommunications Act was approved.

But the Minister still has to formally announce the date when the legislation comes into effect.

Yesterday the Minister responsible for Telecommunications told a conference for Bermuda and Caribbean managers for Cable and Wireless that he hoped the new law would come into operation on Thursday, January 1, 1987.

He added that a new optic fibre cable linking the UK and the US offered Bermuda a chance of obtaining new high quality telecommunications links.

A 25-year-old cable between Bermuda and the US was now nearing the end of its life span and Government was concerned that it should be replaced with modern technology.

"In my view the quantum leap that occurred in our telecommunications development was the laying of the Manahawkin Cable in 1962, which probably resulted from the fact NASA required services here as part of the development of their space projects," said Sen. Collis.

"The life of that cable is running out and the Bermuda Government has been most concerned to ensure the continuation of such a facility and replacement by enhanced technology."

Good telecommunications links were important to the island's tourism and international company businesses and Government regulation was here to stay.

"Prior to 1983 telecommunications had been treated in rather a piecemeal fashion in Bermuda and issues had been dealt with on an ad hoc basis.

"Government recognised then that it wanted to be more involved in telecommunications and it appointed a Minister of Technology and set about getting the regulatory framework into place."

But he stressed Government was not intending to enter the telecommunications business and was satisfied with the services provided by Cable and Wireless and the Bermuda Telephone Company.

"There was a great need for Government regulation in the public interest and to monitor their activities and we made the first major step with the Telecommunications Act earlier this year," he said.

/13046
CSO: 5540/022

BERMUDA

CABLE AND WIRELESS PLANS FIBER-OPTIC COMMUNICATIONS

Hamilton THE ROYAL GAZETTE in English 22 Oct 86 p 1

[Text]

Cable and Wireless yesterday announced a proposal to plug Bermuda into a sophisticated fibre optic communication system.

The announcement came on the heels of a plea on Monday by Legislative Affairs Minister the Hon. Charles Collis to replace the 25-year-old cable connecting Bermuda and the US with "enhanced technology."

Sen. Collis had been speaking at a conference of Bermuda and Caribbean managers of Cable and Wireless.

Last night Sen. Collis praised the Cable and Wireless announcement, saying: "It can certainly only be positive as far as Bermuda is concerned."

Not surprised by the proposal, Sen. Collis said now that it has been made official he will take it to Cabinet "in the near future."

"We still have a little work and investigating to do," he said.

The fibre optic system will stretch from the United Kingdom to the United States, and is slated to go into service in June 1989, said a C&W Press statement.

"It gives us the basic roadwork on which new technologies can be planned," said Sen. Collis.

He said Government had been aware of the proposal for some time, but was concerned it would not provide full access to the United States. However, he said, the huge multinational conglomerate AT&T is now expected to be one of the cable's users and that will ensure Bermuda access to the United States and beyond.

The basic use of the cable will be simple telephone calls, said Sen. Collis. But it will also have the capacity for transmitting all types of data.

"The potential is there," he said, "for someone sitting in the middle of Australia with a computer to communicate with someone in Bermuda."

The cable will also provide access to Europe, said the Press statement, "a market which is currently only accessible by coaxial cable or via satellite."

"The early availability of high quality digital cable capacity will maintain Bermuda's position in the forefront of modern telecommunications."

GUYANA

GTC WORKING WITH JAPAN, TRINIDAD, UK, ITALY ON PROJECTS

Georgetown CATHOLIC STANDARD in English 12 Oct 86 pp 1, 3

[Text]

THE GUYANA Telecommunications Corporation (GTC) has concluded an agreement with Nissho Awai, a Japanese telecommunications firm, to implement its direct dialling system for overseas calls.

So said Mr. Lambert Philadelphia when he met the Georgetown Chamber of Commerce on Fri. Sept. 12.

The Chamber had come to complain of the poor telephone service provided by the Corporation, which was adversely affecting business.

Direct dialling, which should be introduced by May next year will, however, be restricted to those who have to make frequent overseas calls.

Ten thousand telephones will be able to use this service - 7,000 in Georgetown, 2,000 in Linden and 1,000 in New Amsterdam.

Nissho Awai will be paid on a monthly basis from the earnings of the international telephone system, as it will give no credit.

GTC is also having talks with Trinidad and Tobago with a view to upgrading the tropospheric system to give about 60 more circuits through the Caribbean by May 1987.

By that time Guyana should have 132 circuits. At present only 28 are working.

Many of the 28 are faulty or purposely not used, as each circuit costs US\$36,000 a year.

In addition cables have been bought from British Telecommunications Export Co. and small spare parts have been acquired from the Italian Marconi Co.

All these have been paid for from overseas earnings.

Mr. Philadelphia was optimistic that by May next year there should be a marked improvement in the telephone service.

/9274

CSO: 5540/023

PERU

RADIO LIMA BECOMES RADIO CADENA; DETAILS

Lima EL COMERCIO in Spanish 25 Oct 86 p C-2

[Text] With its new name of Radio Cadena, the former Radio Lima has begun transmitting from its studios at Avenida Arequipa 4130, San Isidro, using the same frequency of 1200 KHz. Starting next January, it will also broadcast on provincial transmitters, and it will begin broadcasting on FM as well.

This announcement was made by Julio Schiaffino, managing director, who also listed the station's staff of executive producers: Gonzalo Iwasaki Cauti, press director; Luis Miguel Lopez Cano, sports; and Elena Passapera, production.

Radio Cadena broadcasts with a power of 10 kilowatts, covering all of Lima. Its transmitter is located on Avenida Colonial and is the same facility the station used when it was known as Radio Lima.

Members of the station's staff include: Juan Iglesias, Alberto Beingoles, and Javier Chavez for soccer; Mario Capellino for automotive coverage; and Lolo Diaz for the management of "Sports Vision." Ramon Alfaro will be responsible for a program of recorded music.

Programming begins at 0600 with the news report, "Radio Cadena Informativa," which includes a political segment handled by Mario Guimarey and Monica Delta. From 0900 to 1100, the Radio Cadena journal is presented. This is a music show featuring participation and contests. There is also a news show and "Saca Pica," a humor-information segment featuring Palomeque, Salvador Otoy, and Anaro La Rosa.

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CSO: 5500/2008

PERU

ENTEL-PERU TO INSTALL AUTOMATIC TELEPHONE CENTER IN PIURA

ENTEL President's Announcement

Lima EL PERUANO in Spanish 28 Oct 86 p 3

[Text] ENTEL-Peru is going to install a modern automatic telephone center with a 1,000-line capacity, direct dialing, and other facilities for its users, entirely of Peruvian design and technology. It will be located in Ayabaca in Piura department.

"With this project, developed by our company's personnel, we are breaking away from the technological dependence which we have had on the developed countries in the field of telecommunications," said Jorge Fermi Herrera, ENTEL's president, in statements to the press of Piura department.

Fermi also pointed out the great savings that building our own telephone centers will mean for Peru.

"If we had ordered this center built by a foreign company, it would have cost us over \$2 million, and it would take us 2 years to get it. ENTEL's technical staff will complete this project in 2 months, and it will cost us less than \$500,000," he reported.

In addition, he stated that a new field is being opened up for our national industry, along with new job markets for Peruvian technicians and engineers.

Fermi, accompanied by ENTEL-Peru's general manager, the engineer Carlos Chian, last weekend inaugurated eight Community Telecommunications Centers located in a number of towns and rural areas in the Tumbes and Piura departments.

In Tumbes department, he turned over to the community the "Andres Araujo," "Las Malvinas," and "San Pedro de los Incas" CCTs (Community Telecommunications Centers).

Then he opened the "Ignacio Escudero" OCT in Sullana and the "Urbanizacion Vicus," "Santa Rosa," "Once de Abril," and "Quinta Julia" OCTs in the city of Piura.

With these new centers which it has just opened, ENTEL now has 268 OCTs serving the community. Before the end of this year, 600 will be operating in towns, villages, and communities all over Peru.

In addition, Fermi announced the investment of over \$18 million to be used for telecommunications projects throughout the nation. "ENTEL will use its own resources for these investments," he stated.

Further Details

Lima EL COMERCIO in Spanish 28 Oct 86 p A-12

[Text] Piura. With investments of over \$15 million, ENTEL-Peru plans to provide telecommunications services for all the towns of Piura department within the next 4 years.

The president of the state enterprise, Dr Jorge Fermi Herrera, reported this after speaking of the efforts the company's workers have made to offer constantly increasing telecommunications services to the community, especially to those sectors most in need of such services.

"We would like every household to have a telephone, but that is not possible because of the high cost involved. For that reason, we are establishing community telecommunications centers, where one phone can be used by a large number of the residents of an area, town, or community," he reported.

Fermi explained that during the 1986-1990 period the company will conduct the following projects in Piura department: expansion of Piura's PRK telephone exchange by 2,000 new lines, bringing its capacity to 14,300 lines; work is to begin in 1987. Establishment of the national data-transmission network, with the installation of a switching center in Piura with 20 access ports. This will allow the city to join the world of information technology. In addition, the expansion of the microwave trunk system will improve telephone, telex, and telegraph services. This program covers the following locations: Bayovar, Chulucanas, Catacaos, and Negritos. Telegraph services are to be automated in Ayabaca, Catacaos, Chulucanas, Huancabamba, and Morropon. Another project involves digital expansion, with the installation of modern centers located in Piura (5,500 lines); Sullana (7,000 lines); and Talara (4,000 lines). Coin-operated telephones are to be installed in Piura, Talara, Sullana, Paita, and Chulucanas.

Community Centers Now Operating in Tumbes

Three new community telecommunications centers have opened in Tumbes, which will benefit 20,000 inhabitants of its rural and urban areas. They provide local and long-distance telephone service with direct dialing both within Peru and internationally, national and international telegraph service, and message reception services.

The new centers are: "Andres Araujo" and "Las Malvinas," located in urban areas, and "San Pedro de los Incas," which serves the rural area.

Jose Fermi Herrera, ENTEL's president, said that the capacity of the present telephone center will be expanded by 2,600 lines, and the project will be completed this year. The national data-transmission system with eight access ports will be completed in 1987.

He also announced expansion of the microwave trunk system to improve telephone, telex, and telegraph service. The radio links, physical lines, and long-distance system will all be improved to serve the department's most remote settlements.

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CSO: 5500/2008

PERU

BRIEFS

AREQUIPA AIRPORT RADAR EQUIPMENT--Arequipa. CORPAC [Commercial Airports Corporation] will soon install a radio aid system for air navigation in Arequipa. This is a VOR system, which will help guide aircraft during poor weather, thus helping pilots to land at the airport. It also provides directions and more precise guidance to pilots. Even though it has not been definitely decided where the VOR system will be installed, it was said that it will probably be located in the vicinity of the "Teniente FAP Jaime A. Montreuil Morales Airport" of this city, or at La Cruz Hill in the Samanco district to the southwest. It was also announced that CORPAC will later purchase additional equipment to permit continual operation of the airport. The community is awaiting with interest the renewal of commercial flights, considered a vital need for a major commercial and industrial city like Chimbote. Furthermore, personnel are being trained and given refresher courses so they can provide the efficient service required. [Text] [Lima EL COMERCIO in Spanish 28 Oct 86 p A-12] 7679

CSO: 5500/2008

ST LUCIA

DETAILS GIVEN OF PROPOSED TELECOMMUNICATIONS BILL

Castries THE WEEKEND VOICE in English 27 Sep 86 p 5

[Text]

A new telecommunication Bill will seek approval in the senate on October 1. The Bill, entitled the Telecommunication Act 1986, to receive safe passage during a meeting of the House of Assembly earlier this month.

Containing five parts and 42 sections, the Bill places heavy emphasis on telephone, telegraph and radio communications, but at the same time it defines telecommunication entirely.

According to the act "telecommunication" means "transmission, emission, reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems."

While this definition clearly includes television the Bill has no section detailing any policy on that particular medium.

The Bill also gives the Minister concerned, tight control over local telecommunication operations by making provision for a seven-member board of directors appointed by him. The board will function primarily in an advisory capacity, and although part of its role will be "to consider applications for telecommunication licences," the final decisions lie with the Minister who "may grant any person a licence to construct, maintain or operate a telephone or telegraph system." As far as radio communication is concerned "a licence may be granted to any person on such terms and conditions as the Minister may think fit."

The members of the Telecommunication Advisory Board

includes: the permanent secretary in the Ministry responsible for Telecommunication or his delegate; a representative from the Ministry of Information; the Commissioner of Police or his nominee; a representative of the telecommunication engineers or such other association concerned with telecommunication matters as the Minister may consider fit; and three other persons as the Minister may consider fit.

The Bill offers a fine, a jail term and even seizure of property in question for those who install and operate telecommunication services without a valid licence. In the case of telephone and telegraph services the penalty is a \$1,000 fine, jail for six months and possible forfeiture of property. The penalties are slightly reduced for illegal radio operations with a fine of \$500, a one month jail term and forfeiture.

The Bill also stipulates that "every licence shall comply with the provisions of the International Telecommunications Convention and Radio Regula-

tions of the International Telecommunication Union.

There are also penalties for unlawful and deliberate interference with telecommunication signals and for unlicensed radio apparatus sellers, dealers and technicians.

Section 28 (2) of the Bill states: "Any person who uses or deals in or repairs radio apparatus without having in force a licence for the purpose, or who sells or deals in or repairs radio apparatus upon any premises other than those specified in his licence, is guilty of an offence and shall be liable on summary conviction, to a fine not exceeding two thousand dollars."

A procedure of business is even spelled out for licensed radio dealers. Sellers and other dealers of "radio apparatus" must keep registers of their transactions, and such registers, along with licences and premises, are to be inspected by "any public officer authorised by the permanent secretary at all reasonable times."

Unauthorized radio stations

and radio equipment operated and installed on board ships or aircraft in St. Lucia's territorial waters and airspace are also subject to penalties. According to the Bill broadcasts that are "prejudicial" to the interest of St. Lucia must not be made by St. Lucian citizens who are on board ships on the high seas and on aircraft in international airspace. The retribution for this offence is a fine of \$2,000 and/or imprisonment for one year.

The Bill gives the Governor-General emergency powers to "have control of transmission and reception" of telegraph and telephone services, and to "make orders as may appear desirable" with respect to the possession, sale, purchase, construction and use of radio equipment in "any place in St. Lucia or on board any ship while the ship is in the territorial sea of St. Lucia."

The Bill also forbids the granting of licences whose terms and conditions would adversely affect agreements with government or any "unexpired licence issued under the Wireless Telegraphy Ordinance."

/9274

CSO: 5540/024

TRINIDAD AND TOBAGO

CABINET NAMES UNIT TO DEVISE TELECOMMUNICATIONS POLICY

Port-of-Spain SUNDAY EXPRESS in English 2 Nov 86 Telecommunications Supplement p 1

[Text]

A WORLD conference on Telecommunications Development was held in Arusha, Tanzania in May 1985. This conference was held on the invitation of the International Telecommunication Union (ITU) to consider a report entitled "The Missing Link" prepared by a team of international experts on telecommunication development. It was attended by over 100 countries whose representatives were the people responsible for telecommunication development and who discussed and debated the report for one week at the end of which the "Arusha Declaration" emanated.

Trinidad and Tobago was represented at this conference by a team headed by the Hon Minister of Public Utilities and National Transportation, Dr Cuthbert Joseph whose report to Cabinet instigated them to note, that some of the important issues addressed, related to finance, technology, the proposed International Telecommunication Centre for Development and in particular that, as a result of the dramatic development in telecommunication technology over the past decade, there arises a need for integrated policies and management systems for the various services within the telecommunications sector in the country.

Cabinet therefore agreed to the appointment of a committee "to formulate a clear national policy for telecommunication development." Members of the committee are:

— Mr R.W. Ragbir— Chairman, Director of Telecommunications
— Mr Tyrone Rajnauth— Senior Project Analyst, Ministry of Finance
— Mr Lennox Worrell, General Manager, Textel
— Mr Clarence Hordatt, Manager, Corporate Services, Telco
— Mr Frank Thompson, General Manager,

er, NBS

— Mr Edward McDowell, General Manager— Radio Trinidad

— Mr John Barnotti, General Manager, TTT

— Mr Sadanand Ramnarine, Head, Telecommunications Dept., John S. Donaldson Technical Institute

— Mr Carlton Ellis, Senior Economist— Ministry of Public Utilities & National Transportation.

— Ms Althea Roche, Public relations Officer, Ministry of Information.

The study areas are:

- (1) Telecommunications and Economic, Social and Cultural Development
- (2) Development of the Industry— Technology Transfer 1970— 1980— 1985— 2000
- (3) Structure of Tele-

communications entities in Trinidad and Tobago

- Broadcasting (Television and radio)
- Telephone (local and international)
- Radio Communication
- Data and Telex
- others

(4) Funding for development

(5) Cost/ benefit of service to customers

(6) Regulations and Licensing— Telecommunication Bill

(7) Regional Policy

(8) Local manufacture

(9) Education

(10) Broadcasting Policy

(11) Satellite Telecommunication issue (TVRO)

(12) Research and Development

(13) International telecommunication bodies— ITU, CTC, Intelsat, Citel, etc.

(14) Transborder flow

(15) Others.

BANGLADESH

PLANS TO DEVELOP TELECOMMUNICATIONS TOLD

Dhaka THE BANGLADESH OBSERVER in English 26, 27 Oct 86

[26 Oct 86 p 5]

[Text]

The authorities in Bangladesh keep in view the general trend in the telecommunication field all over the world today, which is: a gradual switchover to the digital technology.

THE Government has taken up a number of steps for the development and improvement of the country's telecommunication system. An amount of Tk. 341 crore was allocated under the Second Five Year Plan (SFYP) for this sector but the actual expenditure was Tk. 346.90 crore including an amount of Tk. 38.73 crore for upazila and Chittagong Hill Tracts Telecommunication development.

A total of 39 projects were completed during the SFYP while 30 other on-going projects spilled-over to the Third Five Year Plan involving an estimated cost of Tk. 30.88 crore.

Meanwhile, the Government has spent a substantial amount of money for the repair and construction of post offices during the SFYP. A total of 291 new post offices were opened raising the country's total number of post offices to 7,583 from 7,292 at the beginning of the SFYP. A total of 16 vehicles were procured for the improvement of mail delivery and mail transportation system. A total of 95 new post office buildings and 298 residential quarters for the postal employees have also been completed during the SFYP period. In addition to these steps, a new programme at an estimated cost of Tk. 21.76 crore was taken up for the construction of upazila post office

buildings in 1982-83. So far over 76 upazila post office buildings have been completed.

During the SFYP, a total of 62 thousand new telephones were added to existing 1,20,000 line units. Of the total lines, 46,000 were installed in urban areas while the rest, in rural areas.

Under the programme of automation and modernisation of the telecommunication system, the number of auto-exchanges increased from 45 to 84 at the district headquarter.

Under the expansion of telephone facilities below the district level, a total of 144 magnet manual exchanges with 30 lines capacity were set up at many of the upazila towns while at some upazila towns 20 line auto-exchange have been installed. One hundred Union Councils and rural growth centres have been connected by public call offices during the plan period.

The present Government attaches much importance to the technological development in communication. In view of the importance of telecommunication for economic progress, the government has set up digital trunk exchanges, with automatic number identification facilities in Dhaka (300 lines), Chittagong (100 lines), Khulna and Sylhet each with 500 lines. Dhaka

has today facilities for direct dialling with 18 overseas countries and 67 countries in transit. The international subscriber dialling local exchange has so far provided 982 connections to the subscribers of metropolitan Dhaka.

Meanwhile, 96 new overseas telegraph/telex circuits and 129 overseas telephone circuits have been opened. The total number of overseas circuits have been raised to 291 in 1984-85 through expansion of Bethunia Satellite Earth Station and Talhabad Satellite Station in Dhaka. Four digital electronic exchanges—one each at Dhaka, Chittagong, Khulna and Bogra have been installed to provide nation-wide dialling facilities. So far 26 district towns have been brought under nation-wide dialling (NWD) system against the target of 34 during the SFYP.

A special project for development of telecommunication in Chittagong Hill Tracts has been drawn up at the terminal year of SFYP. One hundred thirteen telegraph offices were set up in urban and rural areas and 1000 telex lines were commissioned during the plan period. The Dhaka-Chittagong microwave channel of 1800 lines in place of 560 lines has been completed during the SFYP.

Five telecommunication training

sub-centre-one each at Dhaka, Chittagong, Rajshahi, Jessore and Barisal have been set up for manpower development training to meet the increasing need of skilled manpower in this sector.

The Telegraph and Telephone Board has earned a substantial amount of revenue surplus during the Plan period. The annual revenue receipt of the T&T Board increased to Tk. 151 crore in 1984-85 as against Tk. 60 crore in 1982-83.

With the expansion and modernisation of telecommunication system the government took up programme for production of electronic switching factory along with existing electro-mechanical system of Telephone Shilpa Sangstha (TSS). Besides, as a support of the telecommunication system Bangladesh Cable Shilpa Limited has been geared up to produce increased volume of its production of cables and other equipment.

[27 Oct 86 p 5]

[Text]

THE general trend all over the world is to gradually switch over from analogue to digital technology in the field of telecommunication. The government has formulated policy of coexistence of both the system in view of resource constraints so that there can be gradual elimination of analogue switches. The Third Five Year Plan (TFYP) envisages installation of digital microwave system and digital computer controlled electronic local exchanges for the improvement of the country's telecommunication system and accurate billing. The telephone-population ratio is likely to increase substantially from the existing rate by the end of the TFYP period through installation of about 75 thousand telephones. The district towns which are yet to be covered by automatic exchanges, will be connected by automatic exchanges during the TFYP replacing the existing manual exchanges. The district towns will be connected by stable microwave of UHF radio link and the channel capacity will be expanded to meet the increasing need of telecommunication traffic during the TFYP. Efforts are underway to bring the rest of the districts under direct dialling system and nation wide dialling system by the end of the TFYP. The T&T has been able to increase its revenue earned

more than two and a half time in two years through use of modern digital technology and computer processing of calls. There are at present four main trunk automatic exchanges and one international gate way exchange.

The government is contemplating to extend telecommunication facilities to all the upazila headquarters. And to meet the increasing need of the upazilas the government plans to install 42 auto-telephone exchanges with total capacity of 6700 lines and expansion of 95 manual exchanges from the existing 30 lines to 70 lines each during the TFYP.

During the TFYP telegraph services will be modernised by establishment of a gater exchange at Dhaka and three sub-exchanges one each at Khulna, Bogra and Chittagong. District and upazila headquarters will be connected with the teletypewriter services under upazila telecommunication project. The government's strategy will be to meet at least the registered demand of telephony in greater Dhaka city during the TFYP.

The major programmes of TFYP for development of this sector include construction of 29 post office buildings, 246 units of residential quarters, improvement of mail services by procurement of 41 vehicles, 50 three-wheelers and 10 two-

wheelers, procurement of 131 various types of machines, and construction of building cum post-masters quarters in 157 upazilas. The programmes also include replacement of remaining 11 district manual exchanges by automatic exchanges and installation of 34 digital telephone exchanges at metropolitan city and major district towns, installation of 42 automatic telephone exchanges at the important upazilas, installation of 322 UHF radio links between district towns and their upazila headquarters for improvement of trunk facilities, expansion of 3000 lines PAXTAX and installation of 4000 telex and 1770 gater lines, expansion of Dhaka-Khulna digital microwave system by 1800 channels.

The programmes also include expansion of 167 overseas circuits for telegraph/telex and 142 overseas circuits for telephone during the TFYP to increase the total number of overseas circuits to 600.

Besides establishment of a satellite earth station in Dhaka with 800 channels and establishment of a communication centre for billing, accounts and planning purposes has been envisaged in the TFYP for the development of telecommunication for better service to the growing needs of the people.

(TTC feature)

INDIA

SATELLITE-BASED INFORMATION NETWORK BY END OF 1987

Calcutta THE STATESMAN in English 10 Nov 86 p 12

[Text] New Delhi, Nov. 9.--The satellite-based Government information network which is being established to cover all States and districts in the country, under the expansion of the computerization programme of the National Informations centre, is expected be in operation by December 1987.

As part of the network called NIONET supercomputers and large computers are being installed at Delhi, Pune, Bhubaneswar and Hyderabad. The systems are already in operation in Delhi and Pune and in addition, mini-computers and super-minicomputers will be installed at State capitals and important cities.

District headquarters will have personal computers and all district will be connected by micro earth stations. The NIONET programme includes connecting regional centres, State computer centres and some district-level computer centres.

The centre was set up by the Department of Electronics to assist Ministries and Departments of the Government of India in organizing and developing information systems assisting in computerized data analysis and providing training to State and Central Government officials in the use of computer and system analysis methods.

According to what Parliament was told last week, computers have been introduced in almost all fields of economy and utility services in the public and private sectors. These include the Railways (freight and passenger reservation), Posts and Telegraphs insurance, Customs, excise banking and agricultural and rural development.

A parliamentary study in most Government Departments indicates that computerization has had a far-reaching effect.

/13046
CSO: 5550/0034

INDIA

THIRD WORLD OFFERED ASSISTANCE IN TELECOMMUNICATIONS

New Delhi PATRIOT in English 10 Oct 86 p 5

[Text]

Minister of State for public Enterprises K K Tewary on Thursday said India was committed to giving assistance in the telecommunication field to Third World countries which have been fed on wrong and misleading information by the industrialised countries, reports UNI.

Prof Tewary, in his valedictory address at the first India-US conference "Telecommunications for Modern India" in Delhi said that the information explosion facilitated by telecommunication technology has opened the flood gates to consumerism and, worse to propaganda which could drown culture and wreck traditions.

He said the developed countries have been manipulating economic and political interests at the cost of the Third World countries.

Referring to India's commitment to a new international information order, Prof Tewary said Indian assistance in the telecommunication field would go a long way in resisting pressures of developed countries.

On the role of communication technology to increase productivity, Prof Tewary said that improvement in the efficiency and cost of telecommunications systems could provide a crucial opportunity to increase the competitive ability and economic prosperity of countries and corporations.

Rapid progress in the socio-economic fields has resulted in an information explosion for which necessary means had to be found to store and retrieve what was relevant. In fact an important role has been cast for the sector in the overall economic development strategy adopted in India.

Over the next two decades the growth of the information industry was expected to lead to rapid diffusion of a number of technologies, which would increasingly rely on technologies derived from the computer and electronics industries, facilitating the development of an integrated infrastructure for information processing and transmission.

/13046
CSO: 5550/0018

INDIA

TELECOM GIANTS OFFER INDIA LATEST KNOWHOW

Bombay THE TIMES OF INDIA in English 6 Nov 86 p 14

[Text]

NEW DELHI,
November 5 (UNI).

TWO international giants who recently got together have offered India technical assistance to catch up with the latest developments in telecommunication technology.

The new company is confident that India could make a "quantum jump" in the next five years to find a place in the world telecom map.

The chief executive of the new combine, AT and T of the United States and Philips of the Netherlands (APT) is of the view that India has no time to wait until its own technology is developed.

Talking to visiting Indian journalists in Amsterdam last week, Mr. F. C. Kuznik, vice-president (marketing) of the company, said that the centre for development of telematics (C-DOT) will take a long time to develop additional exchange for more than 20,000 lines.

Mr. Kuznik felt there should be room for a second supplier of high technology in telecommunications in India, without interfering with the agreement with Alcatel.

Telecommunication has always been a highly specialised industry, but today even more than ever before, development costs have been steadily increasing.

Mr. Kuznik pointed out that the only way for an economic public telephone exchange acquisition is by supplying them in sufficient quantity, so that mass-production methods can be implemented and development costs spread over as broad an installed base

as possible. This was the main reasoning behind Philip's participation in the joint company.

Mr. N. P. van Schouwenburg, corporate internal and external relations manager, said AT and T and Philips Telecommunications (APT) is currently working on the modernisation of the Indian telephone network. This project includes the supply of modern mobile telephone exchanges with a total capacity of 75,000 analogue stored programme control (SPC) lines.

He said that APT had already delivered 25 containerised telephone exchanges to the department of telecommunications. By the end of this month, one more containerised mobile exchange will be commissioned near Lodhi colony in Delhi, and another one in Bombay by the end of this year.

The mobile analogue switches are computer controlled and can handle 500 to 4,000 subscribers.

According to the general manager in product group transmission, APT is currently executing a multi-million dollar order from the department of telecommunications for advanced digital transmission equipment. It involves the supply and installation supervision of 140 m. bits coaxial transmission equipment for 11 routes in northern and western India for a total length of 550 km. The system can carry 140 million signals per second. This is equivalent to handling 1920 telephone conversations simultaneously.

He said the existing cables in India were good enough to carry digital information. The APT will be ready to map out a plan of how to modernise the network efficiently.

/13046

CNO: 5550/0033

INDIA

INDIA, BHUTAN TEAMS MEET ON TELECOMMUNICATIONS

BK271715 Delhi ISI Diplomatic Information Service in English 1536 GMT 27 Oct 86

[Text] A high-level delegation from the Department of Telecommunications visited Bhutan from 21-24 October for a telecommunications coordination meeting with Bhutan. Indo-Bhutan telecommunications coordination meetings take place periodically in order to find expeditious solutions to any problems in connection with the development of Bhutan's telecommunications network and service.

The present meeting, held on 22-23 October, approved commencement of work on the Takhti Peak-Phuntsholing microwave link in Bhutan to be executed by the Government of India as a turnkey project with a grant of over rupees 3.5 crore. The project is important in providing a direct microwave link between Thimpu and Phuntsholing, the commercial center of Bhutan, as well as links with other important stations between these two towns.

The coordination meeting also discussed other aspects of Indo-Bhutan cooperation in telecommunications, such as deputation of Indian experts, training of Bhutanese nominees in India, supply of spare parts from India, repair facilities in India, the commissioning of the first telex exchange in Bhutan, the introduction of an STD between India and Bhutan, and other telecommunications projects in Bhutan. The Indian delegation reiterated its commitment to continuing the fullest cooperation with Bhutan in this field.

The Bhutanese delegation appreciated the cooperation from India and thanked the Indian delegation for the recent commissioning of a sixty channel VHG link between Phuntsholing and Hasimara, thus facilitating a more reliable telecommunications link from Phuntsholing to Thimpu, as well as to India.

/9274

CSO: 5550/0023

INDIA

PAPER GIVES DETAILS ON PUNJAB 'RADIO PIRACY'

Detailed Information Revealed

New Delhi PATRIOT in English 23 Oct 86 p 1

[Article by Vineet Dikshit]

[Text]

Communication experts believe that the recent spree in radio piracy in Punjab can only be by people who have definite information about the State police's wireless systems.

The Punjab Police is using "duplex mode" radio links to their various centres which experts consider 'un-jammable' unless someone has definite information on what frequency is being used. The 'duplex transmission' is similar to a telephone where two separate channels are provided, for transmitting and receiving. Since VHF radio spectrum (30 MHz to 300 MHz) is used its range is limited to a maximum of 30 km radius.

The Centre earlier this month had dispatched a team of radio engineers to one of their most elaborate listening posts in Jalandhar city to track down the source of the clandestine radio operation.

The 'wireless planning and coordinating wing' (WPC) of the Communication Ministry which monitors all the radio traffic of the country through its dozen odd monitoring stations has a primary responsibility to keep track of illicit wireless operations harmful to national interests.

On 10 October radio operators at Chandigarh police headquarters noticed a strong signal over-riding their communication channel, when a lone voice said that "this is Voice of Khalistan" and interrupted the security command network for more than 15 minutes.

Again on Sunday last, the third such incident within 20 days, a religious discourse (Shabad vani) was monitored on the very high frequency (VHF) band of Punjab Police network for nearly 20 minutes and again the monitoring agency miserably failed to locate the source of pirate radio signal.

According to communication experts, the time required to pinpoint the direction and location of any radio transmitter with the aid of standard radio direction finder (RDF) is less than 1/10th of a second.

The technique used to detect a pirate radio transmitter, known as quadrulation, involves setting up of four direction finding systems equipped with special antennas, working simultaneously at different places in the area where jamming occurs.

Each antenna indicates the direction from which the jamming signals originate and the four directional lines are supposed to meet around the place where the transmitter is located.

Direction finding is one of the basic skills required to get a "Radio Ham" licence and specially in the USSR and the US "fox hunting" is a regular sport activity pursued by amateur radio enthusiasts. It is quite surprising that the agency, the WPC wing, which issues radio ham licences, has badly foxed "fox hunting".

In 1984 also extremists had extensively used amateur radio transmitter and they had undetected radio

link across the border. The equipment then used was top of the line radio ham transceiver ICOM IC-750, of Japanese make, which was later recovered from the pond inside the Golden Temple during Operation Blue Star.

Clandestine radio operations by extremists came to light early last year when a 15 minutes long Khalsa Voice programme was aired from a floating transmitter at high seas. This particular broadcast was made by Radio Caroline, operating off the 12 nautical mile zone in the English Channel.

Time for broadcasting the first Khalsa Voice programme was purchased at Radio Luxembourg and the broadcast took place on 26 February. Besides a 'shabad' and discourse programme, the broadcast contained a message by Dr Jagjit Singh Chauhan.

Reports Deemed 'Exaggerated'

New Delhi PATRIOT in English 23 Oct 86 p 2

[Text]

Gurdaspur, Oct 22 (UNI)— Punjab police chief J F Ribeiro today said the involvement of policemen in causing interruption in the police communication network in Amritsar district could not be ruled out.

'He, however, regretted that the press was "sensationalising" the matter by misreporting the duration of interruption every time.

He told newsmen here the network was disrupted for the first time for two and half minutes on 30 September, for one minute on 10 October and just for one second on 20 October. 'Shabd Kirtan' was heard on it. Earlier 'Khalistan' slogans were heard on the network, he added.

The police chief said investigations were on to trace those responsible for causing the interruption.

Mr Ribeiro said Pakistan's hand in training and financing of terrorists had been established on the basis of interrogation of terrorists caught by the police.

He, however, said foreign aid to Punjab extremists from Canada had stopped since the arrest of some people by the Central Bureau of Investigation at Jalandhar a few months ago.

He said four gangs of terrorists led by Sukhdev Singh alias Sukha Sipahi-self-styled general Lakha Singh of Khalistan 'commando force' Karnail Singh Fauzi, Gurnam Singh and Waryam Singh, were operating in Punjab. He expressed the hope that the police would bust these gangs soon. He said the police was committed to curbing the menace of terrorism.

Later at Jalandhar the police chief exhorted the officers and jawans of the Punjab police to work with courage, devotion and sincerity.

Addressing a police commemoration parade here to pay homage to the police personnel killed on duty, Mr Ribeiro said that the sacrifice of the jawans killed on duty would strengthen our resolve to fight the menace of terrorism.

Nearly 533 jawans laid down their lives during the past one year of whom 60 belonged to Punjab police, he said. Most of the Punjab policemen were killed by terrorists while protecting innocent persons, he added.

Led by Mr Ribeiro other officers and jawans placed wreaths at the memorial of police martyrs.

PTI adds: The Haryana police has taken stringent security

measures for ensuring safety to the residents of Panchkula, on the outskirts of Chandigarh, where a trader was gunned down last night.

Meanwhile the ban on use of red lights on the top of vehicles in Chandigarh was today extended till 21 November.

Aid for victims: Senior CPI Punjab leader and former MLA Satyopal Dang in Amritsar today, urged Punjab Chief Minister Surjit Singh Barnala, to waive passing middle school as the condition for class IV jobs for families of victims of terrorists, since some victims were too poor to pass middle school.

Mr Dang also demanded that unpaid portions of government loans of such poor families should be written off. "To insist on repayment would be inhuman and unfair", he said.

/13046

CSO: 5550/0031

L8011

STATE-OWNED FIRM TO INTRODUCE MICRO EARTH STATIONS

Madras THE HINDU in English 20 Oct 86 p 13

[Text]

BANGALORE, Oct. 19.

The State-owned Indian Telephone Industries Ltd. (ITI) is entrusted with the job of inducting the micro earth station technology into the country, which would revolutionise the entire data communication field by making available for the first time instant communication from anywhere in India at an "affordable price."

Announcing this at a press conference, the Chairman and Managing Director of ITI, Mr. K. P. P. Nambiar, said the National Information Centre (NIC) had proposed to set up a computer communication network called Nicnet connecting the entire country. The network would initially cover 127 major district headquarters and eventually be extended in two phases first to 450 and thereafter to several thousand locations up to the sub-divisional level.

The "spread spectrum technology" using code division multiple access was identified as the most appropriate for meeting the NIC's requirements and ITI had signed to agreements with Equatorial Communication Co. (ECC), USA — one for the outright purchase of the finished products and another for the technology transfer for the manufacture of micro-earth stations in the country.

Agreements had been signed with Equatorial Pacific International Co. also who owned the technology license of ECC products. The products include among other things C-201 and C-250, which were two-way interactive terminals. Mr. Nambiar said C-201 would be indigenously available during 1987-88 itself. The sale price of the terminal including the all-mounting accessories on roof-top was below Rs. 10 lakhs each. The complete installation and maintenance service would be provided to the customers on contract basis by ITI.

C-201 terminals could be connected to a wide variety of devices. It could be used for reservation systems of Railways, Airlines, hotel chains, electronic fund transfer of chain banks and transmission of written materials such as charts, drawing through facsimile including reports. Mr. Nambiar said C-250 system was not only capable of transmitting data at a high speed but also capable of transmitting digitised voice.

Mr. Nambiar announced that ITI during the Eighth Plan proposed to manufacture annually 7.50 lakhs latest version of electronic push-button and 2.50 lakhs latest rotary type of telephone instruments. — Our Staff Reporter

/13046

CSO: 5550/0020

INDIA

BANGALORE FIRM MANUFACTURES ELECTRONIC PABX

Madras THE HINDU in English 20 Oct 86 p 13

[Text]

BANGALORE, Oct. 19.

The Control Equipment Division of Bharat Heavy Electricals has manufactured the first set of electronic private automatic branch exchange (EPABX) based on the technology developed by the Centre for Development of Tele-matics (C-DoT).

The set was handedover by Mr. M. S. Srinivasa Murthy, Executive Director, BHEL here to Mr. S. G. Pitroda, Adviser, C-DoT, at a function on Saturday. This 128-port electronics PABX (called BHEX 128) is the first in the line of a range of digital switching products developed specially for working in Indian environment.

The EPABX, a desk top system, comprises of modular electronic printed circuit assemblies functionally carrying the task of signal processing, terminal interface, tone generating, power supply etc. In addition to normal features of an electronic exchange, the system provides capabilities for voice/data transmission which make BHEX 128 suitable for most present and future communication needs. It has a completely non blocking switching network which provides high capacity and total availability of the system. The use of special semi-conductor integrated circuits reduces the total power consumption and consequent heat dissipation, thereby reducing the cooling requirements.

The modular construction of BHEX 128 is most suited for easy maintenance and gradual upgradation of the capacity. The customer can plan for expansion of the system as the needs grow. All critical electronic functions are duplicated so that the stand by subsystem takes over and allows the continuous availability of the system. Extensive diagnostic programmes built in the system help in quick location of the faults and "keep an eye" on the health of the system.

The operator console is also provided with features which were not hitherto available in the conventional system. Each system of BHEX 128 can support two operator consoles to provide the flexibility of monitoring the incoming and outgoing calls. Automatic load sharing can be organised between the two operator consoles.—Our Staff Reporter

/13046
CSO: 5550/0019

INDIA

ITI HELPING PROGRESS TOWARD MODERN COMMUNICATIONS

Madras THE HINDU in English 21 Oct 86 p 13

[Text]

BANGALORE, Oct. 20.

The green signal for locating the second electronic exchange manufacturing unit at ITI's Bangalore complex by the Union Cabinet late last month has come as a much needed shot in the arm for ITI. This decision exorcises the spectre that has been haunting the company of 2,700 employees who will be rendered surplus by September 1987 as a result of the Government's decision to phase out the manufacture of crossbar exchange equipment at the Bangalore complex. The surplus will increase the nearly 7000 by 1990 when the manufacture of Strowger exchange equipment is phased out.

The Cabinet approval brings to a close a protracted struggle waged by ITI which began in May 1982 when it submitted a proposal to the Ministry to establish India's first electronic exchange manufacturing unit at Bangalore with a capacity of 5,00,000 lines per annum. Unfortunately, politics took precedence over techno-economics and the Government of India opted for a UP location for the first electronic exchange factory. This unit located at Manikpur, a remote place in the Gonda district of UP, commenced commercial production in 1985-86 and is scheduled to turn out 1,20,000 lines in the current financial year. It is manufacturing the E-10 B type of digital electronic exchange in technical collaboration with Messrs. CIT-Alcatel of France. They were the only ones to meet the specifications of the Department of Telecommunications (DOT) which had floated a global tender seeking collaboration.

ITI kept pursuing its case for an electronic exchange unit at Bangalore which could partially absorb the staff rendered surplus due to the closing down of the electro-mechanical exchange manufacturing activities towards the end of the Seventh Plan period. In order to reduce the investment needed, ITI proposed in June 1985 that the new project could be based on the assembly principle, with components and sub-assemblies contracted out. A feasibility report based on this was approved by the board. Not much later, the DOT decided that it would be preferable to continue with the CIT-Alcatel technology for the Bangalore unit also since the collaboration agreement include the

technology for making the newer generation of digital exchanges (E10-S) with subscriber digital access unit which can cater to the integrated services digital network (capable of transmitting data and facsimile in addition to voice).

Bond issue: Doubts about the availability of funds needed to finance the Bangalore ESS (Electronic Switching System) factory were cleared by ITI. About this, Mr K. P. P. Nambiar, Chairman-cum-Managing Director of ITI says, "As against a sanctioned outlay of Rs. 335 crores for the Seventh Plan, our estimated expenditure for the plan period is Rs. 610 crores which includes Rs. 134 crores for the Bangalore ESS (the Manikpur ESS cost Rs. 177 crores) we are confident of covering the gap of Rs. 275 crores by borrowing from the public. Our first bond issue was a success and we raised Rs. 117 crores without much effort. We are going in for another bond issue of Rs. 100 crores in January next and this time we propose to tap the rural rich and small towns who were left virtually untouched in the first bond issue."

A doubt was also expressed that the cost per line of the electronic exchange with the Alcatel technology would be higher than the norms laid down by the DOT and the Department of Electronics (landed cost plus 20 per cent of similar exported equipment), but the lower investment figures for the Bangalore ESS, due to already existing infrastructure and assembly line principle, will enable ITI to keep well below these costs per line.

Another point raised was that the Ministry could not afford to purchase the equipment manufactured at the Bangalore ESS since its plan budget had been slashed to Rs. 4,000 crores only from the proposed Rs. 12,000 crores. However, it was found that if production commences in September 1987 with a phased programme of 36 months to full capacity then the DOT will have to purchase only Rs. 400 crores worth equipment from Bangalore ESS during the Seventh Plan period (the DOT has recently approved the Government to have its Seventh Plan budget raised to Rs. 6,000 crores).

Major projects launched. They are the high speed circuit and extension of the Bangalore Rare ESS project and heavy upgrade of the unit on September 24 last. However, for ITI this is only the first step in a major manpower requirement and technology upgradation perspective plan that it has proposed for the next 15 years.

The plan is based on the recommendations of a study team of the DOT for phasing out the electro-mechanical exchange production lines in the ITI factories in accordance with the overall national telecommunications plans. The phasing out schedule is:

- (A) Cross bar line of Bangalore — 1986-87
- (B) Strowger line of Rare Bareil — 1989-90
- (C) Strowger line of Bangalore — 1989-90
- (D) Modernisation of Rare Bareil — 1984-85

ITI has worked out a scheme of starting new electronic exchange production lines to coincide with the phasing out programme and thereby absorb the surplus staff. At present there are 2772 persons in it including 2475 in Strowger divisions in Bangalore, 2475 persons in Indian cross bar and 4122 persons for Strowger division at Rare Bareil.

A summary of the perspective plan is given below:

Proposed	Replacing Staff	Year of start	Year of completion
ESS-II (Bangalore)	Crossbar	1984-85	1985-86
ESS-III (Rare Bareil)	Strowger	1987-88	1988-89
ESS-IV (Bangalore)	Strowger	1987-88	1989-91
ESS (Pune)	—	—	—
ESS-VI (Rare Bareil)	Crossbar	1984-85	1985-86

Each of the above ESS is dimensioned to produce 500,000 lines per annum at the time of stabilisation. Thus by the end of the century, ITI which is now having a capacity to make around 2.6 lakh lines a year of electro-mechanical exchanges should be able to make 3 million lines a year of digital electronic exchange without increasing the present staff strength.

Only then will the ITI be in a position to help implement the Sarin Committee's recommendations of providing telecommunications facility to the extent of 12 per cent of the population in the urban areas and 2 per cent in the rural areas. To meet the objective of 30 million lines in the country by the turn of the century, as envisaged by the telecommunication technology plan of the DOT prepared in June 1985, and overall of two million lines per annum will have to be added during 1990-95 and about three million lines per annum during 2000-2005.

The technology for the ESS-II and IV may have to remain the C.T.A. system while the switching system being introduced independently by C.C.T.A. Centre for Development of Tele-

communication system is being developed by the Centre for Development of Telecommunication system.

Finance plan with provision of 1000 crores each for the 150 machines should start in about Rs. 150 crores in 1985. ITI needs an additional Rs. 100 crores for the year of Rs. 200 crores over the next five years. The 150 crores projected within the 1000 crores of the above scheme is to be provided.

While it is evident to contemplate a modern digital exchange in telecommunication system in the country, one of the aspects in the technology of the modern exchange is the facilities for transfer, the national long distance, the subscriber will have to pay heavily for the technological upgradation. To give an example, the cost per line of a digital exchange from 1981 at Mankapur is about Rs. 3,500 to 10,000. The cost per line of the electro-mechanical exchange made at Rare Bareil is only Rs. 4,000. More significant, the initial cost of the E.T.S.B. electronic exchange made at Mankapur is Rs. 7,500 in the first year of production which is expected to be reduced to Rs. 400 in the fifth year — (the cost of the exchange is Rs. 10,000 in the first year of production). On the other hand, the initial cost of the first year crossbar (raw materials excluded) is virtually nil. Thus the country will have to give a very heavy price for technological exchange for the luxury of having a modern telecommunication network. It is to be noted that the E.T.S.B. has been established since 1972.

ITI phasing out obsolete systems

The Bangalore Rare Bareil Telecommunication System (BRTS) is being replaced by the Bangalore Rare Bareil Telecommunication System (BRTS) with an annual production capacity of 500,000 lines, according to the Director and Managing Director of ITI, Mr. V. R. A. Kumar.

The first unit of a crossbar telecommunication system will take the telecommunication system to phase out progressively over a period of 15 years. The Strowger and crossbar equipment in Bangalore and Rare Bareil units and replacing them with digital switching equipment.

Cordless phone: Production of the 'slim line' telephone designed and developed with the latest state-of-the-art technology had just begun. The cordless telephone was in the final stage of design which consisted of a base station to which the telephone was connected and a portable handset that could be carried at a distance of 100 metres from the base station either for receiving or for making calls.

Rotary phone: The ITI had begun manufacture of 'Face' rotary telephones using rocking armature receivers after entering into collaboration with Face Standard of France. The latest electronic push button telephone using 'Face' technology would be manufactured from the current model of the 'Face' standard.

By the end of the century, the ITI will be in a position to produce 30 million lines in the country by the turn of the century, as envisaged by the telecommunication technology plan of the DOT prepared in June 1985, and overall of two million lines per annum will have to be added during 1990-95 and about three million lines per annum during 2000-2005.

During the current year, the ITI had plans to produce eight lakh instruments, four lakhs in Bangalore, three lakhs in Nainital and a lakh in the Srinagar unit Mr. Nambiar said.

The ITI had scheduled to supply 24 multi-access rural radio equipment to provide access to 576 long-distance public call offices. The Nainital unit would be manufacturing these equipment in collaboration with Kokusai Electric Co. of Japan. It would enable provision of subscriber telephone service to inaccessible regions.

Transfer of technology: Mr. Nambiar said one of the significant and far-reaching policy decisions adopted by ITI was transfer of technology to the State Electronic Corporations in the field of transmission equipment.

They include manufacture of three-channel composite equipment for open wire system. Under an agreement, the Electronic Development Corporation, Goa (EDC) would install a capacity to produce 200 terminals a year with a turnover of Rs. 2 crores.

The Andhra Pradesh Electronics Development Corporation would start the manufacture of signalling panel testers required by the Department of Telecommunication based on transfer of technology by ITI.

PCM equipment: The Primary Pulse Code Modulation equipment (PCM) would be manufactured by the Karnataka Telecom and the Karnataka State Electronic Development Corporation in collaboration with ITI. Similarly, Keltron Power Devices in Trichur in Kerala would produce thick film hybrid micro-circuits with ITI collaboration.

A telephone instrument manufacturing factory in Assam would shortly be set up by ITI. The plant would manufacture one lakh digital instruments initially.

New unit: Mr. Nambiar said a unit of ITI would shortly be set up exclusively for installation and maintenance by undertaking turnkey projects.

/13046

CSO: 5550/0021

INDIA

PAGHAT ITI UNIT TURNS OUT 2,000 DTAX CIRCUITS

New Delhi PATRIOT in English 1 Nov 86 p 13

[Text]

Palghat, Oct 31 (PTI)—The first 2000 circuits of the digital trunk exchange (DTAX) being manufactured by the Indian Telephone Industries (ITI), Palghat, are ready and are expected to be commissioned in the trunk automatic exchange at Cochin by the middle of next year.

ITI's Palghat unit additional general manager told a visiting party of newsmen from Cochin that by March 1987, another DTAX of 7000 circuits for a Delhi telephone exchange would be ready.

The ITI would reach its total capacity of 30,000 circuits per annum in 1988 and it has been proposed to double its DTAX manufacturing capacity during the seventh Plan period.

The technology for DTAX production was obtained from Alcatel of France to modernise the nodal exchanges in the country's telecommunication network. At present, India has trunk automatic exchanges of the analog type based on crossbar tech-

nology which has become obsolete in most advanced countries.

DTAX production forms part of the Palghat ITI's third phase the expansion costing around Rs 62 crore. The programme includes production of 50,000 lines of electronic rural automatic exchanges, 50,000 lines of electronic private automatic branch exchanges and 30,000 circuits equivalent to 60,000 lines of digital trunk automatic exchanges.

Mr Srivastav said the technology adopted for rural automatic exchanges had been developed in house in the form of digital integrated local-cum-transit (ILT) exchange which had the capacity of 512 lines expandable to 2000 lines.

ILT was expected to be the main vehicle for telephone switching in rural areas and several hundreds of these exchanges are expected to be installed in the national telephone network in the seventh and eighth Plan periods. Its first unit will be produced in Palghat by December 1986, and 5,000 lines of digital ILT by March 1987.

/13046
CSO: 5550/0032

INDIA

APPLICATIONS OF INSAT-1B TO TELECOM NETWORKS TOLD

Madras THE HINDU in English 23 Oct 86 p 13

[Text]

BANGALORE, Oct. 22.

The Indian Space Research Organisation announced today that the Insat-1B had joined the very small and select group of geostationary VHRR (very high resolution radiometer) instruments that had completed three years of continuous, satisfactory operation without any failure or exercise of any redundancy.

On October 15, 1986 the satellite completed its third year of operation since it was launched by the eighth flight of the United States NASA space shuttle on August 30, 1983, and brought into operational service from October 15. The satellite had been maintained in its designated orbital position and had performed satisfactorily during the entire period.

At present 38 telecommunication earth stations were in operation in the Insat-1B network, providing 3960 two-way voice or equivalent circuits over 69 routes. As of October 15, 1986 the VHRR meteorological instrument on board the satellite had been commanded to give more than 13,500 images, some 13,481 full earth disc images and 85 sector scans.

Applications: The Insat-1B's applications include THE HINDU's facsimile transmission link between Madras and New Delhi. The prototype equipment for PTT's satellite-based news and facsimile dissemination system has also been successfully tested.

One hundred data collection platforms (DCPs), including one at the Indian base station in Antarctica, are deployed. One hundred disaster warning system (DWS) receivers are installed in selected cyclone-prone eastern coastal areas of Andhra Pradesh and Karnataka.

Of the 184 TV transmitters in the country, all except five are in the Insat TV network. TV transmissions of the Insat-1B now average about 750 hours per month. Some 3200 direct reception sets (DRSs) are deployed in various parts of the country for direct reception of Insat-1B S-band TV transmissions. In addition to the two S-band higher power TV transponder channels, from August 1986 a C-band transponder channel is also in TV use. This channel is supporting regional network of TV transmitters in Maharashtra. It is to begin in Andhra Pradesh soon.

At present 94 stations of All India Radio are in the Insat-1B radio network which provides a five channel feed.

The demands for Insat applications, services and capacities far exceed the original expectations. A number of new schemes for Insat utilisation have been approved and are being implemented while some others are being processed. In this context will come the string of launches Insat-1C, Insat-1D and second generation Insat (Insat-2) satellites—from early 1988 through early 1990s.

/13046

CSO: 5550/0036

INDIA

EXPERTS URGE INDIGENOUS CAPACITY IN OPTIC FIBERS

Madras THE HINDU in English 25 Oct 86 p 13

[Text]

MADRAS, Oct. 24

Two electronic experts from the Government of India have suggested that India should establish manufacturing facilities for optic fibre cable units for initial cost advantage and freedom from dependence on foreign suppliers. There are plans to invest more than Rs. 700 crores during the Seventh Plan to set up nine fibre optic links in the country for a total length of 6600 km.

The experts—Mr. R. N. Goyal, Director (projects), Telecom Directorate, Communications Ministry, and Mr. Vijay Kumar, of the Department of Electronics, New Delhi, have pointed out that with a projected annual growth of 30 per cent, the stakes in fibre optics are enormous. Since the total conversion to fibre optics is a very long project—it may take upto 50 years—it is important to realise that fibre optics system possesses everything that suits them for terrestrial applications. Many manufacturers are already offering suitable optics systems. NEC of Japan has brought out a complete range with the highest capacity of 7,680 voice channels on a pair of fibres. The repeater spacing for this system is about 44 km.

Better placed: Intercontinental traffic is at present carried by communication satellites. Experts are worried about the kind of traffic that the satellites would carry during the 1990s. The threat has come with the forthcoming commissioning of the undersea optic fibre cable across the Atlantic and Pacific oceans, by 1988. It is feared that when the competition does arrive and tariff drops, optical fibre links, with their much longer payback periods, are better placed than satellites. Customers prefer cable circuits for long distance voice communications due to inevitable delay on satellite

links. This would make optical communication systems a threatening alternative to satellite systems. It may however be mentioned here that at present Intelsat derives 75 per cent of its income from simple voice telephony, they said.

Satellites' advantages: However, there are areas where satellites have important advantages over optical systems. These are their ability to provide point to multi-point link, useful for TV broadcasting and providing links to customers in sparsely populated regions and hostile terrain.

The fact that the capacity of the optical fibre in the correct application-multimode for short distances, low/medium capacities and, mono-mode for longer distances and larger capacities—is limited only by electronic information processing equipment, has let loose their manufacturing and installation activities. The United States, due to install six lakhs kms. of optic fibre cables this year, is way ahead of the world. The West German Bundespost plans to lay one million km. of similar cables in its trunk routes up to 1995.

Trans-Atlantic cable: British Telecom has already laid 16,000 km. of cables and has stopped ordering for coaxial cable altogether. By 1990, it would erect 1.6 lakh km. of cables. The trans-Atlantic cable to be laid by 1988 would provide 40,000 speech circuits.

France is going ahead with the conversion of all its short distance links for the time being. Japan has already laid 30,000 km. of cable at a total cost of \$260 million.

They predicted that other possibilities for the future are high definition TV pictures at homes, using 1200 lines instead of 625.

/13046

CSO: 5550/0030

INDIA

BRIEFS

GURKHA SECRET RADIO--New Delhi, Nov. 7.--Two M.P.s from West Bengal, Mr Dipen Ghosh (CPI-M) and Mr Suradas Dasgupta (CPI) have written to Mr Ajit Panja, Union Minister for Information and Broadcasting, requesting him "to put an end to the highly partisan role of the Kurseong radio station". They said that they had received complaints that the Kurseong radio station had become a "clandestine mouthpiece" of the Gorkhaland agitation, and was "dishing out" news items helpful to the "violent GNLF movement". The local news bulletin in Nepali was highlighting the so-called desertions from other political parties to the GNLF. The letter also alleged that the guest house of the Indian Oil Company was being used as a GNLF hideout. [Text] [Calcutta THE STATESMAN in English 8 Nov 86 p 9] /13046

SATELLITE PARKING SPACE--Uncertainty over the allotment of parking slot for INSAT-IC in the geostationary orbit area for communication satellites has been resolved following a last minute agreement with the Soviet Union. According to informed sources 93.5° East are the new coordinates for the multi-purpose satellite which is third in the series of INSAT-I programme. India lost its parking slot when it failed to place its instrument within the stipulated five years after its "booking" in 1979. INSAT-IC launch was hindered by abrupt grounding of US shuttle programme following Challenger's explosion earlier this year. The original orbital slot allotted to India, 94°E was thus taken away by a Soviet communication satellite. As per the understanding reached between India and USSR last week both have agreed to share the 'parking space' by moving their satellites slightly away from the original position. [By Vineet Dikshit] [Text] [New Delhi PATRIOT in English 29 Oct 86 p 11] /13046

JOINT SATELLITE PROJECT--Madras, Oct 22 (UPI)--The Indian Space Research Organisation (ISRO) and the Council of Scientific and Industrial Research of Australia are to undertake a joint research project in satellite technology. A memorandum of understanding for the purpose was signed during Prime Minister Rajiv Gandhi's visit to Australia last fortnight. The collaboration is in the areas of launch vehicles, tracking and satellite communication. This was mentioned by Associate Professor Dr M J Miller, at the School of Electronics Engineering of the South Australia Institute of Technology. [Text] [New Delhi PATRIOT in English 23 Oct 86 p 5] /11046

CSO: 5550/0018

IRAN

BRIEFS

PORT TERMINAL CONSTRUCTION--Tehran, 19 Oct. (IRNA)--The large terminal of Martyr Beheshti Port in Chahbahar, Sistan-Baluchestan Province will be put into operation by late March next year. In its Sunday issue, Persian daily 'JOMHURI ESLAMI' quoted a port official as saying that the terminal with an area of 300,000 sq. meters has capacity for loading and unloading 300 trucks daily. The official said that during March 85-March 86, as many as 24,623 trucks carried 440,000 tons of wheat, barley, corn, rice, sugar, fertilizers and other commodities from the old terminal of the port to different parts of the country. Between 150 and 200 trucks now call at the port every day, the daily quoted the official as saying. [Text] [Tehran IRNA in English 1640 GMT 19 Oct 86 LD] /12624

CSO: 5500/4704

ISRAEL

BRIEFS

LEASING FROM WESTERN SATELLITE--[Report by Ya'akov Friedler]--Haifa--Starting next year Israelis will have a choice of TV channels galore, though at a price. 'Oded Dovrat, general manager of the Ampa Satellite Communications Company, told the Haifa Rotary Club yesterday. The Communications Ministry will shortly issue tenders for a third channel to operate 16 hours daily screening films, sports and entertainment on a subscription basis. The broadcasts will come from a Western communications satellite from which the ministry has leased three channels, one for TV and two for communication. By the end of next year a new and smaller dish-antenna, to cost only half of the \$5,000 price of the present market dishes will bring 15 channels from TV stations all over the world straight into viewers' homes, Dovrat said. In five years, a national cable TV service is to start operating, replacing the pirate stations which have an estimated annual turnover of \$30-\$40 million "black" untaxed money from viewers' fees. Dovrat said the government will issue tenders for cable TV which is to charge viewers about \$20 monthly plus a \$250 link-up fee. It too will offer a wide choice of broadcasts, Dovrat said. [Text] [Jerusalem THE JERUSALEM POST in English 31 Oct 86 p 4 TA] /6662

CSO: 5500/4503

GUINEA

COMMUNICATIONS DIRECTOR ON WONKIFON EARTH STATION

AB247022 Conakry Domestic Service in French 1245 GMT 24 Oct 86

[Excerpts] The minister of information and culture and the secretary of state for posts and telecommunications on 21 October visited the Wonkifon earth station. As a result of this visit, we have met with the director of International Telecommunications Department, Baba Rakouma, who talked to us about the expansion and renovation program of the station.

[Begin recording] [Rakouma] This renovation project which we have embarked upon at the Wonkifon earth station is aimed at increasing the number of SEPC [expansion unknown] circuits which correspond to the number of telephone circuits. We established the earth station with 24 SEPC circuits which have the possibility of constituting 12 telephone circuits--12 in and 12 out--but as of today, we cannot [words indistinct] so as to enable the Guinean population to communicate freely; we must increase the number of these circuits. And it is this expansion work that we have currently embarked upon. The expansion is to be conducted in three states. First, we had to ensure that the Wonkifon earth station is set firmly in the ground. This earth station always gave in. And whenever there was a thunderstorm we were forced to close down the station. Since the first repairs, we have improved upon the earthing process and are no longer forced to close down because of thunderstorms. Our equipment is currently impervious to thunderstorms. We are now at the second stage, that is to say, the mini-extension. We decided to carry out this mini-extension 2 months ago. Unfortunately, we had some difficulties in the supply of equipment. Presently, we are carrying out the mini- and major- extension simultaneously. The mini-extension is aimed at adding 6 more circuits to the existing 24 SEPC circuits, bringing the number of circuits to 30. These 30 circuits would have increased our links, but due to the long delay, we are going to carry out the major extension at the same time as the mini-extension and this will bring us to 40 SEPC circuits.

After these SEPC circuits, which are quite difficult to exploit by satellite due to their high cost, we will introduce FM equipment. This FM equipment will enable us to have 46 circuits, if not 60, as we can make a [word indistinct] extension. These 60 circuits, combined with the existing 40 SEPC circuits, will give us a total of approximately 100 circuits at the end of the extension work.

[Unidentified Reporter] How do you solve the electricity problem in Conakry?

[Bakouma] Equipment was installed here in 1979. This equipment has suffered a great deal to the shortage of electricity which has existed since that time. The equipment has worked nonstop for almost 6 years. And during the course of this renovation, the department has thought that while extending the telephone network, we also have to think about logistic support, namely the problem of electricity. We have therefore found our own means of supplying power to the equipment without any power outage which will free us a little while from using the national electricity corporation network.

[Reporter] Does this renovation extend to the television network as well?

[Bakouma] Right from the start, we have envisaged an antenna which will enable us to receive television transmissions while at the same time [words indistinct] television transmissions. That is why, right from the start, we established a station well equipped with a larger antenna, to enable us to produce television transmissions. [End recording]

After Wonkifon, the ministers went to (Korikaria), a border prefecture between Guinea and Sierra Leone, 100 km from Conakry. After a message of satisfaction by the cadres which was read by Karamomoko Camus Camara, the prefect, the ministers went to the site envisaged for the construction of a telephone exchange center which is to link our country to Sierra Leone. Within the framework of the ECOWAS, it is regrettable to note that there is lack of direct telephone links among our countries and they are obliged to pass through the former European colonial capitals in order to communicate. In order to avoid this difficulty, a Pan-African Telecommunications Network project is working towards the establishment of a direct link among the 16 member countries of the community. Guinea has been chosen to serve as a relay station between all the other countries and Sierra Leone. The relay center will soon be established at (Korikariya).

/12232

CSO: 5500/3

LIBERIA

3 TELECOMMUNICATION SUB-STATIONS OUT OF ORDER

Monrovia DAILY STAR in English 26 Sep 86 p 2

[Text] Three sub-stations of the Liberia Telecommunications Corporation (LTC), in Lofa County, are reported to be out of order as a result of a lightning which struck the stations some time ago.

According to the Voinjama Station Supervisor, Mr. Milton Nuhan, the stations had been out of order for the past 16 weeks following the lightning strike.

Disclosing this during a tour of

the affected stations by a seven man technical team to assess the damages recently, Mr. Nuhan said that the Macro Wave connecting Gbanga with Belefina, Zorzor, Lawa, and Voinjama is not in operation.

He said that although the team is doing everything possible to restore normal transmission, it was

still difficult to carry on the necessary repair work due to the breakdown of the generator in Lawa.

Meanwhile, citizens of Lofa County have appealed to the authorities of the Liberia Telecommunications Corporation (LTC) to speedily solve the communication problems in the country.

SEYCHELLES

BRIEFS

PRC DONATES HIGH FREQUENCY RECEIVER--Victoria, 11 Nov (SA/PANA)--SEYCHELLES
AGENCE PRESSE (SAP) today received a high frequency receiver from XINHUA NEWS
AGENCY of the People's Republic of China within the framework of a cultural
agreement signed in Victoria in April this year. The gift was presented to
Seychelles Principal Secretary for Information Patrick Nanty by the Chinese
ambassador in Victoria, Huang Guocai, who both hailed cooperation between the
two countries. Guocai said the receiver will allow for a better exchange of
information to promote friendship and understanding between the Chinese and
Seychellois peoples. Nanty pointed out that the gift of Chinese equipment
has come at a time when most developing countries are trying to balance their
information sources as part of a world-wide effort to create a new information
order. [Text] [Dakar PANA in English 1443 GMT 11 Nov 86] /8309

CSO: 5500/20

SOUTH AFRICA

SABC PHASING IN FM CHANGES

Johannesburg THE STAR in English 19 Oct 86 p 6

[Article by Ian Gray]

[Text] THE SABC has completed the first two phases of its FM radio frequency changes in accordance with the International Telecommunications Union regulations.

The changes will be done in 10 phases. The first two cover mainly the PWV areas and most of the Northern and Eastern Transvaal.

Phase three, which includes parts of Pretoria and the Western Transvaal, will be completed within the next fortnight and the next seven phases between November and July next year.

The SABC says it is important to note that the frequencies on the radio dial have been marked from left to right, from 87.5 to 107.3 MHz. It is important to go through the entire frequency block for a particular station to get the best reception.

For automatic car radios the jumps between stations, previously in steps of 86 KHz, are now 100 KHz in areas where frequencies have been changed.

/12828
CSO: 5500/21

ZIMBABWE

HARARE LINK IN MICROWAVE RADIO SYSTEM

Harare THE FINANCIAL GAZETTE in English 10 Oct 86 p 1

[Text] TELECOMMUNICATIONS experts from Norway were in Harare this week to discuss technical details of a proposed \$20 million microwave radio system between Harare, Tete and Blantyre. The project, scheduled to start in 1987, is expected to be completed by early 1989.

It will be carried out by a Norwegian telecommunications company, and Zimbabwe's Posts and Telecommunications Corporation (PTC) will be the coordinating agency. The finance for the project, which is in grant form, will be provided by Norway and Sweden.

The microwave radio system calls for a provision of a 960 channel link between Blantyre and Tete, comprising four hops, interconnecting the existing microwave system in Malawi with the future national network of Mozambique. This will also involve the implementation of

spokesman said.
"This whole project will be carried out by a Norwegian telecommunications company who will hand it over to the three countries when completed. Although Sweden is also helping with part of the finance, Norad will run the project," said the spokesman.

/12228
CSQ: 5500/21

ZIMBABWE

MINISTER URGES NEW FRONTLINE INFORMATION ORDER

MB151859 Dakar PANA in English 1520 GMT 15 Nov 86

[Text] Harare, 15 Nov (PANA) - Zimbabwe Information, Posts and Telecommunication Minister Nathan Shamuyarira yesterday expressed the need for Frontline States to have a vigorous counter information strategy in order to repel and expose South Africa's propaganda. He said the situation in South Africa has reached a critical stage in which violence has (?broadened) and the regime there was bent to step up its propaganda machinery out of desperation.

Speaking to the *Pan African News Agency* (PANA) the minister expressed appreciation of coordinated efforts so far in the field of information among Frontline States as defined in the Kadoma 1982 declaration. But, he said, the declaration was outdated and needed to be reviewed so that it tallies with the present situation in southern Africa which was tense because of South Africa's repression inside the country and increased aggression against Frontline States. Shamuyarira said the racist regime's propaganda was insignificant because it was not built on truth and more often has fallen on deaf ears as evidenced by the unanimous condemnation of apartheid by the international community.

Expressing regret that no concrete assistance has been received by Frontline States from other countries to counter South Africa's propaganda, Shamuyarira said the matter would be raised at the next PANA inter-governmental council in December so that a new appeal is made to that effect. We will also be able to demonstrate to other news agencies that the situation in southern Africa is now critical requiring them the redouble efforts in assisting Frontline States, he added. The minister said assistance was needed particularly in broadcasting and training of liberation movement cadres in the field of information.

He said Zimbabwe was embarking on 14 million dollar project

involving the establishment of a short-wave station as soon as possible to cater only for liberation [words indistinct] that on the fund [words indistinct] take only 18 months to install the station aimed at informing the people in the region, in Namibia as well as South Africa on the atrocities of the racist regime.

The minister commended efforts made by different countries and institutions like the *Pan African News Agency* (PANA) in countering information lies emanating from South Africa and assisting liberation movements. We are pleased that PANA has established a liberation bureau in Harare with the main regional office in Lusaka, he said, adding that he had agreed with the Zambian minister of information to ensure that PANA news reached all Frontline States and redistributed to the whole continent as quickly as possible. He expressed support to the proposal made in August this year by frontline news agencies editors that liberation movements establish their own news agencies so that they can portray a strong image of the struggle.

Mr Shamuyarira, who is chairman of PANA's Intergovernmental Council (IGC) also disclosed that plans were underway to establish a training centre for PANA journalists. Each country has its training programme but, he said, we need to train people together at some central place so that there is continental interaction between professionals from different parts of Africa.

/8309

CSO: 5500/23

EUROPEAN AFFAIRS

SIEMENS SEEKS COMPENSATION FOR CGE PENETRATION OF FRG MARKET

Duesseldorf WIRTSCHAFTSWOCHE in German 29 Sep 86 pp 174-175

[Unattributed article: "Fire and Smoke"]

[Text] The denial is categorical: There is no offer by American AT&T to the Compagnie Générale d'Electricité (CGE) to provide financial support with the merger of the CGE subsidiary Alcatel with the telecommunications sector of the U.S. firm ITT. "Accounts to this effect disseminated in the press lack any basis" CGE's Paris headquarters confirmed. But Erich Le Boucher, economics editor of the respected newspaper LE MONDE, stuck to his story: "We are not retracting the accounts we published, which we obtained from the best sources." According to the investigations carried out by LE MONDE at CGE as well as at the Paris ministry, the U.S. firm AT&T, the world's largest vendor in the telecommunications market, "verbally" made the offer in question to CGE. It was not rejected by CGE.

To those familiar with the industrial-political scene in France, the unusual maneuver whereby the world market leader provides financial midwife assistance to the future second strongest company in the field does not appear strange at all. Since the late-July signing of the protocol which provides for the taking over of the telecommunications sector of the U.S. ITT group by an European consortium Eurotel under the leadership of CGE, the French firm has to date sought in vain for additional partners to finance this "largest industrial undertaking of postwar Europe." Up to now, only the Belgian Societe General de Belgique has participated with a contribution of \$250 million.

The reason why other interested parties are hesitating is the high cost price. According to the protocol, ITT will bring its telecommunications sectors to the new business for \$2.8 billion; CGE for its part will bring in its subsidiary Alcatel at \$1.4 billion. This exceeds by far the actual value, according to experts in the field. That has the advantage, to be sure, of requiring new partners to dip deeper into their pockets, but the disadvantage is that they will "think twice" about participating (LE MONDE).

For this reason, the two merging partners had to revise the distribution of their participating shares right at the outset. At first it was foreseen that for the time being ITT would retain 30 percent of the common undertaking,

while the European consortium Eurotel would hold over 70 percent. ITT wants to guarantee its leadership of the consortium with a 10-percent interest in Eurotel. The other 40 percent is up for subscription, in slices of 10 percent each. Already at the outset, however, when there were no new interested parties at the signing of the protocol, the Paris government insisted that ITT increase its share to 37 percent and Eurotel reduce its to 43 percent. To be sure, the need for capital was therein reduced by \$300 million on the European side. Nonetheless, if no further partners can be found, CGE will still have to dip deeply into its pocket to pay for the merger. It will require \$700 million, a sum lying at the limit of the state enterprise's capacity.

CGE's discussions with interested German parties--Deutsche Bank and Bosch have been mentioned, among others--have remained fruitless. CGE President Suard: "The Germans wanted a parcelling out of management into a third for CGE, a third for ITT, and a third for them. We were not willing."

The difficulties with the Germans for CGE and therefore for the Paris government as well, go even farther. To wit, the Munich electrical products firm Siemens has notified the French that, since CGE will obtain access to the German telephone market via the German ITT subsidiary Standard Elektrik Lorenz (SEL), it expects compensation on the French market.

One goal of the thrust from Munich is the takeover of CCCT, the former French telephone construction branch of ITT which also belongs to CGE today and which is being offered by Paris for merger with another partner. CGE, however, wants to bring this firm into a cooperative venture with the American AT&T and the Dutch Philips Company according to an agreement negotiated by Suard's predecessor Georges Pebereau. CGE hopes to regularize shares on the U.S. market in consideration for an opening up of the French telephone market.

To forestall "quasi-blackmail" (LE MONDE) by Siemens, AT&T's offer to assist CGE with a merger with ITT would certainly have helped. Paris could hardly deny a green light for an agreement on AT&T's proposal. The consequences of such a maneuver would be immense. It would completely alter the basis of the CGE-ITT merger. Experts in the field would find it improbable that there is nothing to these considerations. "Where there is smoke, there is also fire."

13238/6662

CSO: 5500/2409

EUROPEAN AFFAIRS

EUROPEAN PTT'S ACCEPT STANDARDS

Paris ZERO UN INFORMATIQUE in French 25 Aug 86 pp 2-3

[Article by Eric Sorlet: "Telecommunications--Agreement on Standards"; first paragraph is ZERO UN INFORMATIQUE introduction]

[Text] The CEPT [European Conference of Post and Telecommunications Authorities] agreement on standards is contributing to the opening of the telecommunications terminal market in Europe.

The Europe of telecommunications is gradually becoming a reality. A large step was taken a few weeks ago with the implementation of a new CEPT agreement on European standards. Thus, the first meeting of the TRAC [Technical Recommendations Application Committee] structured in accordance with the agreement, took place on 5 July at Odense, Denmark.

Although the agreement was approved in principle at a meeting of the Directors General of the CEPT last November in Copenhagen, its realization was contingent upon signature by at least 10 CEPT authorities and upon the adoption in Brussels of a new EEC directive on standardization of telecommunications equipment. The directive covering mutual acceptance of technical testing was adopted on 9 June by the Community's Council of Ministers of Industry and will become effective in a year. At the same time, the number of signatories to the CEPT agreement has risen to 14--the FRG, Belgium, Denmark, Spain, Finland, France, Ireland, Italy, Luxembourg, Norway, the Netherlands, Portugal, the United Kingdom, and Sweden.

Commitment to Worldwide Public Consultation One of TRAC's First Decisions

At the first meeting of TRAC, Jean-Paul Duplen, inspector general for the international affairs service of the DGT [French General Telecommunications Directorate], was designated chairman and Mr. Temple, a representative of the UK Authority, was designated vice chairman. Among the decisions made at the meeting was a commitment to undertake worldwide public consultation prior to any final decision on the adoption of a European telecommunications standard. Such standards will be designated by the acronym "NET" [European Telecommunications Standard].

The agreement signed by the 14 authorities provides, among other things, a means for selecting the CEPT recommendations (compliance with which is

voluntary) which could be legally applied to equipment certification in the signatory countries. Thus, a manufacturer who produces a terminal in conformity with these standards and who wants to export it will no longer be required to have it tested in each of the Common Market countries--a single test in an approved laboratory will be adequate and will be accepted by all.

The agreement is open to every member of the CEPT in which legislation exists either on a national level or through an international treaty, giving legal force to the NET standards. The countries involved can thus be members of European groups such as the European Free Trade Association (EFTA).

25050/9190

CSO: 5500/A028

EUROPEAN AFFAIRS

EFFECTS OF CGE-ITT DEAL ON MARKET ACCESS, COMPETITION

Takeover Process

Munich INDUSTRIEMAGAZIN Oct 86 pp 27-36

[Unattributed article: "The Man Who Is Supposed To Outdistance Siemens"]

[Text] Now that the merger of ITT-Communication Technology and Alcatel, the subsidiary of the French state holding corporation CGE, has been decided, things are getting down to brass tacks. The top managers of the two partners are staking their claims. But will CGE chief Pierre Suard really be able to make a success of the new giant telephone manufacturer ?

Until recently, Pierre Suard, 51, was a nobody. To be sure, people in the international cable industry knew about him and in the domestic telecommunications industry, too.

But it was not until the French government dismissed George Pébereau, the head of the state-owned Compagnie Générale d'Electricité (CGE) on 23 July of this year in a surprise move, giving the job to Suard, that the graduate engineer hailing from the French Jura region became known to a wider public.

All of a sudden, there was Suard sitting next to Alain Madelin, the minister of industry, at the crucial press conference on the morning of 30 July at which Madelin gave the green light for the "biggest industrial operation of postwar Europe," which is how commentators referred to the merger of the two industrial giants, the CGE telecommunications subsidiary Alcatel and the communication technology companies of the American ITT Corporation.

It was Suard who signed the memorandum of understanding jointly with ITT chairman, Rand V. Araskog and it is Suard as well, who now heads both CGE and Alcatel, who will be working out the contractual details of the spectacular agreement together with ITT representatives.

Top corporate officers from every corner of Europe are flocking to the art nouveau building on Rue La Boétie in Paris, not far from the Elysée Palace, which houses the CGE headquarters to talk to Suard and he listens to the emissaries as they inform him of the strategies, strengths and weaknesses

of the various companies they represent. The managers exchange information and discuss points of contact and business overlaps.

The Franco-American joint venture is expected to become a reality before the end of the year and all the organizational and management details will be worked out by then as well. The thus far nameless corporation--Europe's biggest telecommunications manufacturer with sales of DM 20 billion and a work force of 145,000--is expected to begin operations by early 1987.

But will Suard really be able to turn the undoubted synergistic potential to advantage? Will he really be able to outdistance established, organically grown telecommunications giants such as Siemens with the help of this transnational merger?

Suard now faces difficult times. He needs to do very hard work to finish what his predecessor Georges Pébereau, the architect of the ITT deal, built up with missionary zeal and his impetuous drive for expansion.

For more than a decade, Pébereau, a graduate of the elite academies Polytechnique and Ponts et Chaussées [Bridges and Roads], put his stamp on CGE--first as managing director and then, starting in 1984, as Président-Directeur-Général (PDG) which is the title given in France to a top business executive. Pébereau must above all be credited with the fact that CGE, for years a conglomerate without much of a profile--but in fact the fifth-largest conglomerate in France with its \$10 billion in sales, a work force of 150,000 and with its 650 subsidiaries and partnerships--managed to acquire a strategic image. Pébereau single-mindedly focused CGE's activities on two main areas: energy and transportation equipment on the one hand and telecommunications on the other. In contrast to the eight other industrial concerns socialized in 1981 and 1982, CGE has never been in the red since that time.

This is why the ouster of the more or less non-political industrial leader came as such a surprise--because up to 23 July 1986 Pébereau seemed to be getting along with everyone. For Edouard Balladur, who was finance minister until last spring, for example, he had obtained a post on the board of two CGE subsidiaries several years ago while Balladur was a mere adviser to Jacques Chirac and a brother of Socialist President Mitterand was a member of Pébereau's own staff of experts.

It seemed as though nothing could go wrong when the new Chirac government decided to make a number of personnel changes at the top of some state-run industries. But Pébereau was one of those asked to leave because he may have overplayed his hand in the ITT coup and so fell victim to his own brand of poker and subterfuge.

Once before, his career had almost ended when he and the then PDC Ambassador Roux had a falling out on basic principles in the late seventies. At that time, Roux had had an eye on Bull but Pébèreau did not think it would be good business to buy the Paris computer company. Roux was more in favor of cooperating with Philips while Pébèreau leaned toward U.S. companies. He was saved from dismissal by the victory of the left in the May 1981 election--because Roux tendered his resignation, saying he would have no part of nationalization.

On the industrial policy stage of a state-run conglomerate, Pébèreau--himself a composite of mandarin and Machiavelli--was able to give free rein to his highly developed gift for argumentation and his legendary powers of persuasion. In 1983, for instance, he succeeded in talking Thomson CEO Alain Gomez out of his telecommunications sector by telling him that government investment programs were running out. Gomez let himself be persuaded and Pébèreau presented the Paris government with a fait accompli. It resulted in an uproar.

Pébèreau adopted an equally rigorous approach when the French nuclear power program ran into trouble. On that occasion, he persuaded Didier Pineau-Valencienne, the head of the since defunct Creusot-Loire group, to let him have a 40-percent share of its nuclear subsidiary Framatome, France's leading manufacturer of nuclear power plant equipment.

But he landed his biggest coup with ITT chief Araskog. Although the CGE subsidiary Alcatel, following its merger with Thomson Télécommunications, had the 84-percent lion's share of the French telephone market and had moved up to the fifth position among telecommunications producers worldwide, Pébèreau felt that Alcatel's meager 4-percent share of the world telecommunications market was not enough to permit it to make anything like a real impact on the global telecommunications industry.

Initially, the agreement with the American company merely aimed at cooperation. The negotiations had begun when the French government evinced interest in the ITT telephone system 12 in the spring of 1985.

But Pébèreau and his adviser Etienne Davignon, a former EEC commissioner and currently the head of Belgium's largest holding corporation, Société Générale de Belgique, had dreams of a high-performance European telecommunications technology concern which would be able to compete effectively with the giant American and Japanese companies.

Simultaneously, ITT managers led by Helmut Lohr, the head of ITT's Stuttgart subsidiary SEL, pleaded for transferring all of ITT's telecommunications operations to Europe and getting the more than two dozen ITT companies all over Europe to collaborate more closely. The fact was that Araskog had dismally failed when he introduced the new System 12 on the American market, the most lucrative in the world. Under pressure from ITT's stockholders and in need of capital for years, he sold ITT's communication technology companies to Pébèreau.

When the closed-door negotiations began, the code name used for Alcatel was "Marianne" and that for ITT was "Roxan" but because Pébèreau allegedly went public with the agreement ahead of time, resorting to his customary ultimatum style to make the government sanction the accord, the cabinet dropped him out of pique.

Given this situation, his successor Suard may in fact be the better choice. Like Pébèreau, Suard is a graduate of the renowned Ecole Polytechnique and like almost all French academics, he learned to think in strategic terms at the university. But in contrast to his predecessor who moved in and out of partnerships, Suard has had a number of years of management experience.

And where Pébèreau ran the operation through a closely knit network of political relationships, Suard starts out by trusting "the people who are already on the job."

Suard began his career at the French ministry of public works in 1960. Following that, he held the post of chief engineer at Orly Airport from 1967 to 1970 and subsequently that of the airport's managing director. While at Orly, he also served as an adviser to Michel Debré, the Gaullist finance minister. In 1973, he joined CGE and quickly advanced to the top spot at Câbles de Lyon, a CGE subsidiary which today is one of the biggest cable manufacturers in the world, with 12,000 employees and \$1.3 billion in sales.

Suard played an important role in the sale of Kabel- und Metallwerke AG (now known as kabelmetal electro) of Hanover by Gutehoffnungshütte to Câbles de Lyon. Speaking of Pierre Suard, his chairman of the board, Dr G Wolfgang Plinke, the managing director of kabelmetal electro, says: "He has a very good way of adapting to his managers."

As managing director of Alcatel, Suard performed the elegant feat of brilliantly consummating the merger with Thomson Télécommunications which Pébèreau had very hastily initiated. Work on the huge merger was begun in September 1983; it was completed by 1 July 1985, 18 months ahead of schedule.

In tough negotiations dealing with costly and complicated social plans, Suard got the labor unions to agree to cutting some 3,000 jobs by the end of 1986, with 1,000 more workers having to trade their job for another job in a different plant.

In the years ahead, Suard will have to resort even more to the knack of consolidating, economizing and getting different style managers to agree among themselves. As head of CGE, he will first of all have to absorb the financial costs of the ITT transaction. By the end of this year Suard will have to send Araskog a check for \$1.5 billion. In addition, the new company will be assuming ITT's debts amounting to \$800 million.

In order to be able to digest these huge sums a little easier, the French have come up with an imaginative solution, i.e. both sides will be pooling their assets in a new company as yet to be established--with ITT contributing \$2.8 billion and Alcatel \$1.4 billion. Many experts believe that this founding capital is far in excess of the actual value but it does offer the advantage to CGE that additional partners, if any, will have to pay a high price to join in.

In order to retain managerial control at reasonable cost, CGE has interpolated a Dutch charter holding company with a 63-percent share in the joint venture. The remaining 37 percent are held by ITT, which had to increase its original 30-percent share to 37 percent because CGE was unable to find any other investors on short notice.

At the end, Pébereau says, he was still negotiating with eight different firms, including British competitors Plessey and General Electric. But the English decided against it; they did not wish to submit to French domination.

As yet, there are only two companies willing to join in: Telefónica of Spain and Davignon's Société Générale de Belgique. For a 10-percent share in the holding company (amounting to a 6.3-percent share in the joint venture) they must together pay up \$570 million. The CGE's \$1.5 billion purchase price is accordingly reduced by this amount.

Due to the decision to re-privatize 65 state-owned companies (CGE is at the very top of the list) Minister of Industry Alain Madelin has not made any moves to provide any funds for the huge transaction. He has merely agreed to restudy the "reprivatization calendar."

As a consequence, Suard had to turn to the capital market to obtain a 5 billion franc loan--a sizable amount given the CGE 1985 cash flow of 3.5 billion francs and its meager 1.6-percent sales profits.

Nevertheless, Suard sees no need to draw in additional financial partners at any cost. "We are not under pressure," Suard says [in the following interview].

It will be a lot harder for Suard, however, to weld Alcatel and ITT's communication technology operations into a high-performance telecommunications concern. "That is a big job," says Helmut Lohr, the head of ITT's Stuttgart subsidiary SEL AG which constitutes more than one-quarter of future business and covers the entire telecommunications spectrum. SEL employs 33,000 workers and has annual sales amounting to DM 5.5 billion. Lohr and the other ITT and Alcatel executives anticipate huge synergistic consequences from the merger. "CGE is the ideal partner for ITT," rhapsodizes Rand V Araskog, "because both companies occupy positions on the world market which are optimally complementary."

Alcatel, whose trade with other countries has been making up just about 30 percent of sales thus far, hopes to use the ITT subsidiaries particularly in order to strengthen its European base in major EEC markets such as the FRG, Belgium Italy and Spain.

ITT, for its part, hopes it will be able to do better in the various Francophone nations of Africa where Alcatel has had good connections for many years.

Intense discussions are sure to take place, says SEL's Lohr, regarding the coordinating function of the new headquarters with respect to the approach to be taken on the international markets.

Because ITT's telecommunications subsidiaries are active in about 90 percent of the same fields as Alcatel, Suard is looking for countless opportunities to take advantage of economies of scale. The fact is that the new joint venture--at least on paper--advances to the position of a leading international supplier of equipment and systems for postal and telecommunications services and to a top spot in relay and transmission technology. The same applies to office communications where the new joint venture, boasting a sales volume of DM 6 billion, is one the largest European suppliers in the field.

But as far as the most crucial sector--that of public communication technology--is concerned where the basic development costs for a new telephone system amount to more than \$1 billion and where rationalization would be most urgent in view of system diversity and market fragmentation, Suard and his executives in the new joint venture will probably have to wait for some time before the synergy effect takes hold.

So as not to arouse the anger of the postal administrations, both telephone systems will be offered separately in the years ahead. And since the Alcatel E 10 system and ITT's System 12 are technically incompatible and therefore cannot be linked together in the short term, the presently emerging telephone giant will not be able to enter the market with a single product until the nineties.

As far back as 1970, the French introduced the Alcatel E 10; it was the first commercial digital system in the world. After the merger with Thomson, they managed to standardize the software and hardware components of the E 10 and the Thomson MT 20.

But while the French and other telephone manufacturers were still working on plans for a centrally computer-controlled switching system, ITT engineers went their own way and came up with a new, decentralized solution, their System 12. The system distributes the control functions necessary for a single switching operation to several microprocessors--an idea that became reality once the high-performance VLSI chips became available.

In recent months, there has been some talk regarding the system which finally went into mass production in 1982 and has been touted by ITT executives as the most advanced telecommunication system ever. The Federal German Postal Service has been extremely pleased thus far with the SEL-supplied digital switching stations; but Bell Telephone Manufacturing Co (BTM) of Antwerp, ITT's Belgian subsidiary, has run into trouble on several export markets at once. The Norwegian Postal Service, for example, was confronted with a one-year delay in delivery and Mexico refused to accept already installed System 12 switching stations because of software problems. Taiwan, for its part, requested reimbursement for advance payments. Competing firms such as Ericsson (in Norway) and Siemens (in Taiwan) were able to take quick advantage of BTM's problems.

The Belgian subsidiary, which is responsible for System 12 development along with SEL, had made too far-reaching concessions to some of the foreign postal administrations. This is why the software engineers became pressed for time as they tried to adjust the telephone system to the complicated specifications of the individual countries.

Now the Germans are taking a hand in the matter. Just recently, Dr Gerhard Zeidler, the man on the SEL board responsible for R & D, was named technical "development leader" (in Lohr's words) for Europe. Zeidler has imposed a strict German research regimen on the Belgian laboratories which Lohr feels will not make life any easier for would-be competitors. "Both conceptually and functionally the delays are under control," Lohr says. "By the first half of next year, all the backlogs will have been taken care of. Our customers have been so informed."

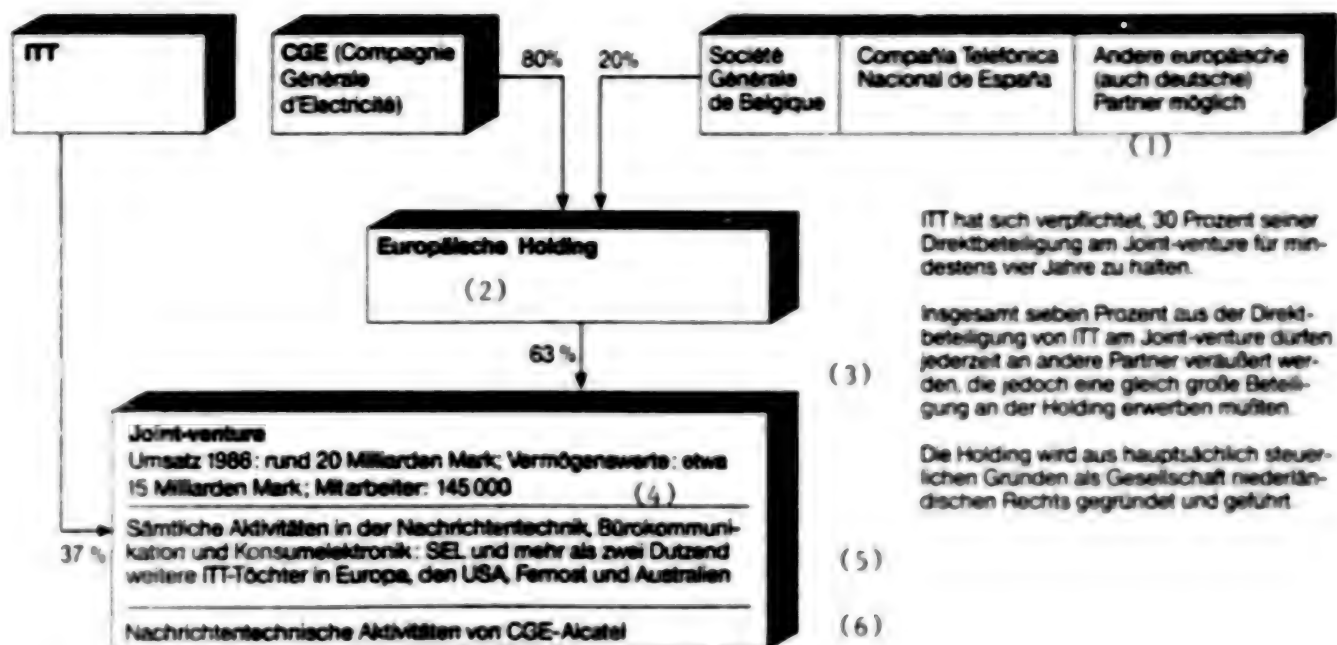
Lohr says there has been no discussion at all thus far about whether System 12 or Alcatel's E 10 will be the one system of the future. It is more likely that the two technologies will eventually be merged.

The R&D operation which runs into the billions is bound to be one of the functions that will have to become more centralized in the future, Suard has said. In principle, however, Suard wishes to see the federated organizational pattern and the decentralized management style now practiced by both CGE and ITT retained in the new giant company. He is thinking in terms of a loosely controlled conglomerate composed of independently operating subsidiaries. "We are not about to turn this into one big stew pot," Lohr says confidently.

As always happens when a merger has taken place, the executives will initially be fighting about matters closer at hand, e.g. who will be elected to the board of the new joint venture; what name is to be given to the conglomerate; where will the company headquarters be located?

When ITT chief Araskog (who will become chairman of the board of the new company) proposed that the new firm's headquarters be located in Brussels, Suard countered by saying that "ITT headquarters is not in Washington either."

Table 1. The French Connection to the World of Communications
The New CGE/ITT Joint Venture



ITT hat sich verpflichtet, 30 Prozent seiner Direktbeteiligung am Joint-venture für mindestens vier Jahre zu halten.

Insgesamt sieben Prozent aus der Direktbeteiligung von ITT am Joint-venture dürfen jederzeit an andere Partner veräußert werden, die jedoch eine gleich große Beteiligung an der Holding erwerben mußten.

Die Holding wird aus hauptsächlich steuerlichen Gründen als Gesellschaft niederländischen Rechts gegründet und geführt.

Key:

1. Other possible European (German) partners
2. European holding company
3. ITT has committed itself to maintaining its direct participation in the joint venture for at least 4 years.
A total of seven percent of ITT's direct participation in the joint venture may be sold to other partners at any time; but these must purchase an equal share in the holding company.
Primarily for tax reasons, the holding company will be established and operated as a business firm under Dutch law.
4. 1986 sales: about DM 20 billion; assets: DM 15 billion; staff: 145,000
5. All aspects of communications technology, office automation and consumer electronics: SEL and more than two dozen additional ITT subsidiaries in Europe, the United States, the Far East and Australia
6. CGE/Alcatel communication technology operations

Table 2. Number One in Europe
Highlights of the Alcatel/ITT Joint Venture

Umsatz 1986	(1)	circa 20 Milliarden Mark
Beschäftigte	(2)	145 000
Marktposition unter den Telecom-Herstellern	(3)	weltweit Nummer zwei, in Europa Nummer eins
Regionale Umsatzverteilung	(4)	78% Europa 13% USA 9% Rest der Welt
Weltweite Aktivitäten	(5)	75 Länder
Umsatzverteilung nach Arbeitsgebieten	(6)	50% Öffentliche Nachrichtentechnik 33% Bürokommunikation, Software, Rechenzentrumsdienste 10% Verteidigung sowie andere elektronische Systeme für Verkehrswesen, Postdienstautomation, Fertigungs- und Lasertechnik 7% Unterhaltungselektronik
Hauptarbeitsgebiete	(7)	
Öffentliche Vermittlungstechnik	(8)	Ortsvermittlungstechnik: Nummer eins in der Welt 34 Millionen digitale Anschlüsse in 68 Ländern als Aufträge oder bereits installiert 17 Millionen digitale Anschlüsse in Betrieb Paketvermittlung
Übertragungstechnik	(9)	Gesamtes Spektrum der Übertragungstechnik Richtfunk Koaxial-Glasfaser-Übertragungstechnik Satellitenbodensation Elektronische Systeme für Satelliten Unterseekabel
Bürokommunikation	(10)	Nebenstellenanlagen, Reihen- und Vorzimmeranlagen, Telefonapparate und andere Endeinrichtungen, lokale Netzwerke, Mobilkommunikation (Autotelefon), Drucker, Kleincomputer Elektronische Mitteilungssysteme
Computerdienstleistung und Software	(11)	

Key:

1. 1986 sales: about DM 20 billion
2. Labor force: 145,000
3. Market position among telecommunications manufacturers: No. 2 worldwide; No. 1 in Europe
4. Sales by region: Europe, 78 percent; U.S., 13 percent; rest of world, 9 percent
5. Worldwide activities: 75 countries
6. Sales by product lines: public sector communication technology, 50 percent; office automation, software, EDP center services, 33 percent; defense, other electronic systems in transportation, postal automation, production and laser technology, 10 percent; entertainment electronics, 7 percent

7. Main fields of activity
8. Public sector switching technology: local switching technology: No. 1 worldwide; 34 million digital connections in 68 countries under contract or already installed; 17 million digital lines in operation; package automation
9. Relay technology: entire spectrum of relay technology; directional transmission; coaxial-fiber optics relay technology; satellite ground stations; electronic systems for satellites; undersea cables
10. Office automation: extension systems; serial and intercom systems; telephones and other end receivers; local networks; mobile telephone systems (car telephones); printers, minicomputers
Electronic information systems
11. Computer services and software

Interview with CGE Chief Suard

Munich INDUSTRIEMAGAZIN in German Oct 86 pp 36-42

[Interview with Pierre Suard, PDG of state-owned CGE, by INDUSTRIEMAGAZIN editor Winfried Wilhelm and INDUSTRIEMAGAZIN staff member Lorenz Winter, date and place not given: "We Are Not Under Pressure"]

[Text] [Question] M Suard, by acquiring ITT communication technology operations, you have moved to the front rank of the European telecommunications industry. What were the main reasons behind this spectacular coup ?

[Answer] R&D expenditures for switching technology systems run into the billions. Alcatel, the telecommunications subsidiary of CGE, is spending 10 percent of its sales on R&D. In the area of public sector communication technology the R&D share has by now risen to 15 percent or higher. These investments must be made because they have a crucial bearing on our competitive status in the future. But one single company is simply not capable of spending such large amounts for any length of time.

[Question] Would it have been the end of the road for Alcatel, if you had been unable to find a partner like ITT ?

[Answer] We already completed the merger of Alcatel and Thomson Télécommunications in 1983 and moved up to the fifth position worldwide at that time. But that merely turned us into a medium large company which did not seem enough to us to prevail in the tough struggle for survival. Now that we have merged Alcatel and ITT, we are the second largest telecommunications manufacturer worldwide after AT&T. That is an entirely different position of strength.

[Question] Was there any danger of Alcatel's being swallowed up by one of its larger competitors, if you had failed to act ?

[Answer] Since we have been placed on the reprivatization list, Alcatel might very well have become the target of other companies. We beat them to the punch. That, after all, is how it is in a competitive situation.

[Question] How did you succeed in making this move where Siemens or Ericsson did not ?

[Answer] I have no way of telling. Maybe the two companies did not try hard enough.

[Question] Was it CGE--or rather Georges Pélereau, your predecessor--that took the initiative or Rand Araskog, the head of ITT ?

[Answer] It was like the chicken and the egg. The first serious negotiations started just about 1½ years ago. It is hard to say exactly who took the initiative originally.

[Question] It has been said that IBM and Northern Telecom, the Canadian firm, joined in the bidding and that that drove the ITT price up.

[Answer] I have also heard that Northern Telecom was involved. But it is news to me that IBM was seriously interested.

[Question] Is the joint venture not one further step toward a far-reaching consolidation in the telecommunications industry? Many experts believe that only three of the eight European suppliers of public sector switching systems are still in the running, e.g. Alcatel/ITT, Siemens and Ericsson.

[Answer] I share the belief that only the financially strong groups will survive. After the merger with ITT, we will be part of that select company.

[Question] What consequences does this deal have for existing cooperative ventures? For example, Alcatel has joint R&D programs in public sector switching technology going on with Siemens, with the Italian firm of Itatel and the British firm of Plessey. AT&T has been negotiating for a long time both with the French telephone company and you with the aim of introducing the AT&T 5 ESS telephone system in France. In exchange, AT&T is supposed to assist you in breaking into the difficult but lucrative U.S. market.

[Answer] The venture with ITT does not have any impact at all on our strategic considerations to increase our activities on the U.S. market. Since ITT is almost non-existent in the American telecommunications business, we will have to look for other partners. But no decision has yet been made on the AT&T issue. Our cooperation with Siemens, Itatel and Plessey will probably not be affected either. Our joint efforts are focused on switching systems of the future and on ISDN, the service integrated digital network. The primary idea is to set standards and specifications for the development of highly integrated chips.

[Question] Didn't you also push for the merger in order to make up for lost ground in terms of technology. Industry insiders say that your Alcatel E 10 system is not as advanced as the ITT System 12.

[Answer] That is not true. The System 12 concept may be more original; but Alcatel introduced the first digital switching system ever when it brought out the E 10 in 1970. By now, more than 50 countries have decided in favor of the Alcatel E 10. More than 20 percent of all the digital telephone systems already in operation with a total of 14 million connections are Alcatel E 10's. That gives us the lead worldwide. There are only 1.3 million System 12 connections in operation as of this date. We would surely never have achieved these numbers, if we had been lagging behind technologically. We do not need a new system.

[Question] Well what was so interesting about ITT, if not their System 12 ?

[Answer] Let me repeat: one needs volume in order to make up for the huge development costs. ITT's product lines are 90 percent identical to ours so that we can take full advantage of economies of scale. This applies primarily to R&D. Secondly, it was ITT's strong European base which aroused our interest. On many markets, we do not compete with one another--so that our market shares both inside and outside Europe are optimally complementary.

[Question] On paper, the new joint venture looks very impressive: \$10 billion in sales, 145,000 employees, the number two telecommunications manufacturer in the world. But you have a long road ahead of you before you can realize this potential. How do intend to consolidate the different activities ? What are your priorities ?

[Answer] We will be discussing that in detail over the next few months. But let me tell you this right now: we will not be consolidating activities because the organizational structure of the new group will be decentralized; the individual companies will retain their autonomous status. Any other approach would be contrary to our philosophy. In the past, CGE was a tightly centralized operation; but then we made it our business to decentralize. Step by step, we established autonomous companies and let them fend for themselves. Most German concerns are more centralized than we, I am sure.

[Question] But the joint venture does not make any sense unless you intend to take full advantage of its synergistic potential. But that again would require a certain amount of centralization.

[Answer] Of course we will have to locate the neuralgic spots where centralization becomes unavoidable. R&D is certainly one of them. But on the production side I see no need to centralize at the moment.

[Question] What about sales ?

[Answer] If we mean to retain or expand our present share of the market, we will have to let our sales force continue to operate as before.

[Question] But you will have to tighten up your export activities because otherwise the Alcatel salesmen and the ITT salesmen will be knocking on the doors of the same customers.

[Answer] There will definitely have to be some coordination on the international markets. But generally speaking I think that competition within the organization will be more of a motivating factor and lead to greater success.

[Question] That could get to be expensive.

[Answer] Quite true. It might be a little more expensive; but we would recapture that because our sales personnel will be independent and highly motivated.

[Question] The workers council of the ITT subsidiary SEL is worried about a loss of jobs because of product overlaps and duplication of activities. It is probably mindful of the rigorous rationalization program of the Thomson group which really roughed up the German entertainment electronics industry.

[Answer] We are not Thomson. We are not thinking of relocating production or of cutting any SEL activities.

[Question] As an example: what will happen to SEL operations such as automatic railroad controls, home electronics or to CTM (Computer Technology Mueller) in Constance, a specialist in medium computer technology. These divisions do not immediately fit into the business plans of the new telephone giant.

[Answer] That is the responsibility of the board of SEL. As long as these operations turn a profit, the gentlemen in Stuttgart will surely see no reason to get rid of them.

[Question] But there is a possibility that CGE might set stricter standards with regard to profit margins in the future.

[Answer] We are strongly profit-oriented; there is no doubt about that. But I cannot really imagine that we might have tougher guidelines than the Americans.

[Question] From what we have heard the new company is offering three public sector switching systems on the market at the present time: the E 10 by Alcatel; the MT 20 by Thomson and ITT's System 12. It is hard to imagine that you will not integrate these different systems sooner or later in view of the development costs you have been taking about. Which of the three systems will be dropped?

[Answer] To begin with, under the Alcatel name we are offering only one system, the E 10--although there are several versions of it, including the Alcatel E 10-MT. Almost all the components of these two systems are identical; the software is fully compatible. In the future, we will be marketing the Alcatel E 10 and the ITT System 12 simultaneously. For some time--perhaps even for the next 10 years--the two systems will not be compatible. We cannot integrate the two systems--out of consideration for our customers, if for no other reason. When a postal administration decides on a telephone system, it is making a long-term investment. Under those circumstances, one cannot simply go ahead and change all the equipment.

[Question] But if you do not take one of the systems off the market, then you will not achieve the necessary economies of scale.

[Answer] What we are talking about here is a life cycle of 10 years. We are now working on the models for the 1990s. And when that time comes, we will probably be marketing only one system.

[Question] System 12 has run into serious delivery problems in a number of countries such as Norway, Mexico and Taiwan. There appear to be some software problems in adjusting to national specifications. Can your development engineers be of assistance to ITT on this score ?

[Answer] The problems you refer to have been greatly exaggerated. In Norway, for example, the first System 12 central switchboard is presently in operation. And as for the time lost--which is not attributable to a conceptual error by any stretch of the imagination--it will no doubt be made up. I would like to know a manufacturer who has not run into delivery problems. Can you imagine the Federal German Postal Service outfitting 40 percent of its program with System 12 equipment, if that product did not come up to expectations ? In Italy, in Denmark and everywhere else, System 12 is working well. I just mention this to show you that the ITT engineers are not in need of any assistance.

[Question] Will you also be introducing the System 12 on the French domestic market--whose telephone systems have been supplied 100 percent by French companies up to now ?

[Answer] I cannot imagine that we will--just as the Alcatel 10 would not stand a chance with the Federal German Postal Service.

[Question] Along with Siemens, SEL is a partner of the German Post with the System 12. Using this inside track, do you think you will have more of a chance to sell other products such as your Minitel videotext equipment which is among the best in the world ?

[Answer] The main question is not the connection to SEL but the regulations the postal service must follow. In the telecommunications business, national policy considerations play a crucial role in all countries. Every businessman and every executive knows what obstacles there are in the different countries and what national peculiarities he must face. That is what we must deal with. We have long since said goodbye to the idea of viewing Europe as one big market. In this new joint venture, we will be guided by these national characteristics as we coordinate our activities on foreign markets.

[Question] Why didn't you make your cable business a part of the new company ? After all, CGE had \$1.3 billion in sales in that sector. SEL is making its cable operation of the new company.

[Answer] You are fully justified in asking this question. But I ask you to consider the following: the cable business is not only of interest to communication technology but also to the energy industry--which is the second major pillar on which CGE operations rest. But you are right: in the long run, the ITT and CGE operations will have to be coordinated.

[Question] ITT owns 37 percent of the joint venture; the remaining 63 percent will be administered by a European holding company yet to be established by CGE. The Belgian firm of Société Générale de Belgique and the Spanish Compañía Telefónica Nacional de España intend to acquire a 10-percent share each in the holding company. You are said to be looking for additional European partners. What is the status of the negotiations ?

[Answer] We are under no pressure and we do not necessarily need any more partners. If other firms wish to join us, they will have to contribute more than just money and they will also have to accept our goals.

[Question] But the giant telephone company is supposed to be a European concern, is it not ?

[Answer] It is a European company because 78 percent of its sales take place in Europe and because the vast majority of its 145,000 employees are Europeans. In this context, the nationality of the owners is of little consequence.

[Question] ITT chief Araskog has come out in favor of locating the headquarters of the new company in Brussels. In fact, he says the firm could move right into the space of the ITT headquarters in Brussels.

[Answer] The Americans believe that Brussels is the capital of Europe and it follows that the headquarters should also be there. But ITT does not have its headquarters in Washington either, but in New York. A final decision has not yet been made. The site will be chosen on the basis of pragmatic considerations. It might be Paris just as well as Frankfurt or Brussels.

[Question] What is the name of the new company ? So far, we have only heard some odd names like "Eurotel" bruited about.

[Answer] We have not yet selected a name.

[Question] How large is the headquarters staff going to be ?

[Answer] I am in favor of a small, unbureaucratic headquarters with a staff of 100 rather than 300.

[Question] And what will happen to the staff of 500 at the Brussels ITT headquarters ?

[Answer] I expect that some of them will be joining us.

[Question] Is it conceivable that you will become the head of this joint venture ? To run such a giant telephone company in an exciting, future-oriented market would definitely be more of a challenge than to run the trimmed-down CGE, wouldn't it ?

[Answer] That would be a challenge; no question about it. But we have not yet agreed on a candidate either.

[Question] CGE is responsible for industrial management...

[Answer] ...that is spelled out in the agreement.

[Question] How much will you yourself or the management of the joint venture intervene in the policies of the participating companies ?

[Answer] CGE will be a part of the top management team, along with the other companies and of course it expects that decent profits will be made. Naturally, the responsibility lies with the management of the joint venture. It will lay down long-range strategy and provide the necessary coordination, e.g. that of foreign markets. As far as strategic planning is concerned, however, I do not think that should be the responsibility of the staff people at headquarters but of the line managers of the participating companies. But at any rate there are no plans whatever to interfere with the business policies of the individual companies.

[Question] Could you provide some more details in this ?

[Answer] No, not as yet. We are now working on a definition of the common spheres of interest which should be under the control of the joint venture.

[Question] What makes you so optimistic about the success of this joint venture ? Thus far, the French have not made a good showing in their transnational mergers: just think of Renault and American Motors.

[Answer] You cannot make that comparison. In this instance, we are all Europeans. There is much more of a common ground--in terms of mentality and management style.

West European Firms React

Munich INDUSTRIEMAGAZIN in German Oct 86 pp 42-49

[Unattributed article: "Market in an Uproar"]

[Text] No sooner was the CGE-ITT coup made public (it had been kept secret until the last moment) than telecommunications executives in Munich, Stockholm and New York went into hectic action in order to save what can be saved.

Siemens chief Karlheinz Kaske flew to Paris on short notice to try to get Industry Minister Madelin to sell him the majority in the state-owned CGCT, France's second-largest telephone manufacturer after CGE-Alcatel.

If France is interested in a genuinely European solution, Kaske said, and is breaking into Germany, Belgium, Spain and Italy via the ITT subsidiaries, it should now provide access to the totally closed French market to Germany.

In exchange for a majority share in CGCT (whose share of the French market amounts to 16 percent) and the opportunity to market the Siemens EWSD switching system in France, Kaske put a generous offer on the table, i.e. he would not only develop and manufacture the system in France but also export it from there.

Shortly thereafter, Björn Svedberg, the president of Ericsson, submitted a detailed offer for his AXE system to Madelin. Ericsson is second in Europe in digital switching systems behind Alcatel (and ahead of Siemens) and Svedberg therefore believes that his firm's chances are good.

AT&T, the giant American company, is also hoping to land CGCT. Just like Siemens, the Americans are putting forward ethical arguments in that CGCT, interestingly enough, was an ITT subsidiary before the company was nationalized by Mitterand's Socialists in 1982.

But purely economic considerations appear to be of greater significance. When AT&T started a joint telecommunications venture with Philips (APT) in 1983, they were able to sell their ESS 5 telephone system to Philips' home base of the Netherlands; but the big breakthrough in other European countries has not taken place as yet. Other companies are still in firm control, e.g. Siemens and SEL in Germany; Plessey, GEC and Thorn Ericsson in Great Britain and ITT in Belgium.

And as for France, the CGE subsidiary Alcatel controls 84 percent of the market, following its merger with Thomson Télécommunications. But with the help of the smaller CGCT, which thus far manufactured the Thomson MT-20 system under a licensing agreement, the Americans are hoping to gain a foothold on the French market.

The first thing the U.S. executives did was to negotiate with DGT, the French telecommunications agency, their goal being to sell the AT&T 5 ESS telephone system in France via CGCT. Concurrently, CGE/Alcatel would be given an opportunity for an exclusive sales contract to deliver radio relay systems (an Alcatel specialty) to AT&T and Philips. The Americans also promised to provide marketing assistance to introduce the French E 10 system on the hard-to-break-into U.S. market.

But to this day, it is a moot point who will win out in France: AT&T, Ericsson or Siemens.

The fight for the relatively insignificant CGCT company (which even posted a \$25 million loss last year) is a good demonstration of how determined the telecommunications manufacturers are to increase their power and share of the market.

The fight is on for a huge volume of sales. Now that postal services throughout the world are switching over from mechanical to electronic telephone systems, annual sales may reach as much as DM 100 billion.

Those who have gained a foothold in the business may expect to add to their profits by servicing and replacing equipment, since the various expensive telecommunication systems are not readily compatible.

The equipment of the worldwide telephone network with its 600 million connections has a product life of 20 years on the average, communications executives say. In other words, 30 million (analog and digital) lines must be replaced each year.

And since communication technology reaches into various other fields, including cables and end receivers, the suppliers of entire systems may expect to conclude additional deals.

But in most countries the postal services let most of the lucrative contracts to local firms or to foreign firms with local production facilities. Under the circumstances, Siemens executives say, 46 percent of the markets (involving 13.5 million lines) are not accessible to their company and another eight percent are difficult to break into.

In the FRG itself, Siemens has a market share of 45 percent. The market share of IIT subsidiary SEL amounts to 36 percent and the remainder belongs Siemens licensees Defewe and Telenorma. In other countries, Siemens faces increasingly stiff competition under sometimes chaotic bidding conditions. 20 to 30 percent overproduction forces the price down even more.

Some 15 different telephone systems, which are technically incompatible in the absence of international standardization, are competing for today's world market. Whether they are of American, European or Japanese manufacture, huge quantities must be sold in order to recoup the huge development costs.

The development of a basic system--three quarters of the cost go into software--requires the efforts of 2,000 engineers for a period of 5 years and costs more than \$1 billion. Adaptation to the specific performance standards of a given country comes to \$50 to \$100 million and, on the American market, even to \$200 to \$300 million.

The United States in particular (which has 35 percent of the world's telephones) has its own characteristics and that market therefore is virtually inaccessible to the top technological firms of Europe.

The Bell Operating Companies' (BOCs) complex requirements for switching systems which are spelled out in a thick set of regulations (the LSSGR) are far more detailed than the guidelines of the Federal German Postal Service. To adapt German switching systems to U.S. specifications, the German Electronic Industry Association finds, would require some 1,500 additional man years in development.

Bellcore runs a test costing an additional \$2 million to determine whether the system really meets the specifications. There is no legal claim to having the test conducted.

Another difficulty for the foreign bidder is the complicated bidding procedure. As a result of the breakup of AT&T, the establishment of the 22 BOCs which have been organized to form seven regional holding companies and the presence of 1,300 independent companies there is no semblance of order on the American market.

The predominant supplier of analog technology to the BOCs is AT&T. In the digital switching system field, AT&T and the Canadian firm, Northern Telecom, jointly hold 64 percent of the market. Among the independents, only GTE with 12 million lines plays anything like a serious role.

The vertical organizational structure of the American telephone manufacturers also is to the disadvantage of their European competitors. AT&T and GTE are not only producers but also operating companies, earning billions from their diversified communication services. In contrast to the German companies, for instance, this permits them to fund their development activities out of the fees they collect.

But on the fragmented European Community market the telephone manufacturers do not have an easier time of it either. To be sure, the community as a whole makes up for more than 20 percent of worldwide sales but none of the national markets amounts to more than six percent. But in order to make a profit, the establishment of a digital switching system would have to make up for about eight percent of the world market share.

This sober assessment has caused even the giants of the communications industry to band together--by way of cooperative undertakings, joint ventures or mergers.

Once more it was the Japanese who went about it in a very clever way. NTT, the government communications agency, came up with the billions needed for the development of the D 60 and the D 70 digital switching system and established the basic guidelines. Four Japanese companies are manufacturing the equipment and exporting the system with slight modifications and under different brand names: the NEAX 61 by NEC; the Fetex 150 by Fujitsu; the HDX 10 by Hitachi and the KBD 70 by Oki. Not burdened by enormous development costs, the Japanese are attempting to break open national bastions by offering their equipment at dumping prices. Thus far, however, only NEC has succeeded in attaining a substantial share of the market--but not in Europe or the United States.

Philips, not as well provided for as the Japanese, decided to throw in the towel. The firm stopped work on its PRX digital switching system in 1983 and embarked on a joint venture with AT&T (calling itself APT) in Hilversum. Its sales in 1986 were \$400 million and it employed 5,000 workers. Since

that time, the Dutch-American subsidiary has been exporting the AT&T model 5 ESS worldwide, with the exception of the United States.

In September 1983, the French followed suit. With government assistance, the CGE subsidiary CIT-Alcatel and the telecommunications branch of the state-owned Thomson company were merged to form Alcatel S. A.--which has now merged with ITT. With the Thomson MT 20 and Alcatel's own E 10 system, their joint share of the French market jumped from 40 to 84 percent.

Although competitors say that Alcatel, by putting both the E 10 and the MT 20 on the market, is continuing to offer two different products, Pierre Suard, the head of CGE, maintains that the MT 20 has since turned into a separate line of the E 10. Both systems, he says, are fully digital and largely compatible.

Siemens and GTE had voiced high hopes when they signed a memorandum of understanding which had them establishing a joint telecommunications subsidiary in the switching and relay technology field. All too eagerly the WALL STREET JOURNAL catapulted the venture (which was to have started out with DM 2 billion in sales) "to second place in telephone switching on the world market."

But the deal did not materialize. Experts from both firms came to the conclusion that the millions of digital lines already installed in the United States by GTE should be maintained at all costs. This is the reason why anticipated synergistic achievements on the biggest single market in the world could not be realized in the foreseeable future.

It was therefore agreed to embark on a second class joint venture--Siemens contributing an 80-percent share and GTE contributing its worldwide relay network and its public sector switching technology activities in Taiwan, Belgium and Italy. In this way, Siemens is in a position to gain access to three national telephone markets.

Even though Siemens continues to operate on its own in the United States, the firm is still trying to reach the number three position on the market behind AT&T and Northern Telecom.

There have been some positive results already. A 3-year skeleton agreement with Wisconsin Bell has allowed Siemens to place its EWSD system in the United States for the first time. And Ameritech, one of the seven regional telephone holding companies, has recognized Siemens as a third bidder next to AT&T and Northern Telecom.

The Siemens-GTE alliance on third country markets has been a thorn in the side above all of Italtel, Italy's flagship telephone manufacturer, which must now review its own cooperative ventures with GTE. Italtel Director Marisa Bellisario first tried desperately to expand her company's share of

about 50 percent of the domestic telephone market and to beat back ITT and Ericsson, the two other bidders of telephone systems.

Since she does not wish to join the European GEC/ITT telecommunications venture any more than the other European telephone manufacturers, she is planning to intensify her contacts to GEC and Plessey, the two British firms and also to put out feelers to Ericsson. The idea behind all this being that an additional transnational telecommunications conglomerate could, if need be, be established.

But there is a good deal of unhappiness in Great Britain now that hopes for a generous solution have been dashed. With the assistance of the British postal service, Plessey and GEC had jointly developed the X system.

But since neither firm has had much success exporting the system, they are both greatly overstocked. A total merger, envisioned as a panacea, was vetoed by the British monopoly commission following a hard-fought takeover battle.

Now the two companies are wondering whether they might not at least have a joint subsidiary manufacture the X system--which would be a difficult undertaking since both Plessey and GEC lay claim to leadership in the industry. For another thing, they are both facing competition in their own country--because in order to reduce dependence on the X system, the British postal service has accepted Thorn-Ericsson, a British-Swedish subsidiary, as an additional bidder.

No wonder that industry experts name the X system and Italtel's UT 10 first when asked who will fall by the wayside in the international telephone industry struggle for survival.

9478

CSO: 550/2418

CYPRUS

BRIEFS

DRAFT BILL FOR PRIVATE RADIO, TV STATIONS--At its regular meeting under President Spiros Kiprianou yesterday, the Council of Minister discussed the establishment of new radio and television stations by private organizations. The Council of Ministers instructed ministerial committee to draft an appropriate bill, in cooperation with the Attorney General's Office. The bill will be submitted to the House of Representatives. [Text] [Nicosia 0 FILELEVTHEROS in Greek 7 Nov 86 NC] /9274

CSO: 5500/2425

GERMAN DEMOCRATIC REPUBLIC

BRIEFS

COMMUNICATIONS AGREEMENT SIGNED--Berlin (ADN)--On 15 October in Berlin, Rudolph Schulze, deputy chairman of the GDR Council of Ministers and minister of post and telecommunications, discussed questions of mutual communications, scientific-technological cooperation, and the assistance in vocational basic and advanced training of staff members of the Afghan post and telecommunications sector with Mohammad Aslam Watanjar, minister of communications of the Democratic Republic of Afghanistan and member of the Politburo of the Central Committee of the People's Democratic Party of Afghanistan. On the same day a government agreement on cooperation between both countries in the post and telecommunications sector was signed. The document contains stipulations on the further development of the mutual post and telecommunications and the assistance in developing the news sector in both countries. Abdul Wahed Baba Jan [spelling as published], ambassador extraordinary and plenipotentiary of the Democratic Republic of Afghanistan to the GDR, participated in the signing ceremony. [Text] [East Berlin NEUES DEUTSCHLAND in German 16 Oct 86 p 2 AU] /12858

CSO: 5500/3004

SPAIN

TELEFONICA TO ELIMINATE INDUSTRIAL BRANCH

Madrid EL PAIS in Spanish 29 Oct 86 p 47

[Article by Luis F. Fidalgo]

[Text] Telefonica's chairman, Luis Solana, will today ask the company's board of directors for authorization to carry out an indepth reorganization of the group, which consists of about 20 firms. In practice, this will be the first step toward the gradual elimination of industrial activity from Spain's telephone monopoly. This would put an end to the policy the company has pursued during the first phase of Solana's term as chairman, and would mean a switch to a new strategy, one that is directly oriented toward service and commercial areas.

According to plans being discussed by the telephone monopoly's management, the company wants to divest the holdings it now has in industrial firms which it shares with foreign partners. That is the case with Cables y Comunicaciones--49 percent of which belongs to the U.S. firm, General Cable; INTELSA [Telecommunications Industries, S.A.]--51 percent belongs to the Swedish firm, Ericsson; and Telettra, of which 49 percent belongs to the Italian firm of the same name. Negotiations have already begun with the Swedish firm.

Telefonica also holds 24 percent of the stock of Standard Electrica, the Spanish subsidiary of ITT, though the possibility of divestment in this case is directly bound to the outcome of negotiations with the OGE [General Electricity Company]--ITT consortium, which Telefonica had agreed to enter initially, but about which the Spanish firm is now somewhat hesitant. In recent negotiations with OGE, Solana has made the Spanish firm's participation conditional upon improved terms for Standard and Marconi within the new consortium, and on having the cost of their reconversion--unofficially, it has been estimated that there is a surplus of about 6,000 employees--not be borne by the Spanish partner.

The situation is now in a stalemate, as the French company is unwilling to accept the Spanish terms. Just yesterday, representatives of Telefonica's top management met in Paris for negotiations with the French firm, which

from the beginning assumed the leadership role in this operation. Yesterday in Madrid, Solana told a delegation of European deputies that his company can not agree to have the French firm reap the profits from this venture.

The AMPER Route

Telefonica also plans to take up again the plan announced approximately 2 years ago, to list shares of some other firms of its industrial group for sale on the stock exchange, following the step taken with AMPER several months ago. SINTEL, of which Telefonica now holds 100 percent of the stock, is the one which the current plans call for offering for public sale, at a time still to be determined, but sometime before the summer. Telefonica would retain 15 percent of its stock to help its subsidiary to successfully handle its listing on the stock exchange, and its own progress as an enterprise.

Following this strategy, it would later proceed to put the same philosophy into practice with the group's approximately 20 industrial enterprises.

Telefonica's holdings in Fujitsu Espana and in AT&T Microelectronica would remain intact. These are the latest two companies in which Telefonica has obtained shares. But on the other hand, service subsidiaries like ENTEL, which handles information systems, will be given a strong boost, with this company venturing into new fields, such as information systems applied to business and to defense.

The new policy of eliminating the industrial group, supported by Telefonica's chairman, has received some criticism within the sector, particularly from the unions, which feel that the company should maintain its role as an industrial stimulus.

7679

CSO: 5500/2420

TURKEY

BRIEFS

TV TRANSMITTER--The Elbistan regional television transmitter was inaugurated by Turkish Radio and Television Director Tunca Toskay today. It will transmit over band 3 and channel 5, covering an area of 8,700 km sq. [Summary]
[Ankara Domestic Service in Turkish 1700 GMT 11 Nov 86 TA] /8918

CSO: 5500/2426

UNITED KINGDOM

ASPECTS OF BBC PLANS FOR WORLD-SERVICE TV REVIEWED

London THE DAILY TELEGRAPH in English 12 Nov 86 p 2

[Article by Harvey Lee]

[Text]

THE BBC has completed a report for MPs on the value of "cultural diplomacy," setting out plans for the establishment of a television version of the World Service. The paper will be presented to an all-party Foreign Affairs committee in the New Year.

It will be handed over at the Commons by a delegation to be led by Mr John Tusa, new head of External Services.

The committee recently began an investigation into the role broadcasters, among others, play in spreading British influence abroad by the promotion of culture and national "values."

The British Council, led by Sir John Burgh, its director-general, gave its evidence last month, arguing that the promotion of national culture and education overseas can influence trade relations.

Mr Tusa's appearance before the committee may be the first opportunity the BBC will have to outline publicly its plans to produce initially two daily international news programmes to be broadcast around the world by satellite.

The project will depend on the BBC's request for £10 million from the Foreign Office to run the service for a year.

Unveiling delay

The Foreign Office already provides £90 million a year to finance the BBC's World and foreign-language radio services from Bush House.

An attempt to unveil the project on this week's edition of BBC-2's "telejournal," to be

followed by a press launch by Mr Alasdair Milne, BBC director-general and Mr Bill Cotton, television managing director, were dropped in the wake of Mr Tebbit's attack on the Corporation's journalism.

BBC executives were concerned that this would not be the most propitious moment to begin delicate financial negotiations with the Government on expanding the Corporation's activities.

But although the BBC has still to put formal proposals to the Foreign Office, officials at the Ministry are said to be pleased with pilot programmes for the services, which will be run editorially by Bush House using BBC television facilities and technicians.

Shown on BBC-2

The BBC plans to offer the new service to international satellite and cable operators including ITV's European SuperChannel, which begins broadcasting at the end of January.

The half-hour news and current affairs programmes will also be shown on BBC-2.

The BBC has already discussed the service with other national broadcasters and is said to have met an encouraging response. It expects to sell the daily programmes mainly to

domestic networks abroad.

It recognised the difficulties it will face reaching "enclosed societies," for example behind the Iron Curtain, and undeveloped Third world countries.

Whereas radio listening may be discreet, viewers in countries where the programmes are not taken by local networks will need highly visible satellite reception dishes and properly tuned domestic receivers. This makes the potential world audience difficult to assess.

The BBC was last night reluctant to discuss its audience research or details of the service.

Financial considerations apart, the proposed service would also have to negotiate possible demands for increased pay and manning from BBC staff unions and objections from Eastern bloc countries which might be inclined to invoke international rules which forbid satellite broadcasting without permission.

But the BBC's External Services are highly regarded abroad and the Foreign Affairs committee is actively looking at ways in which British culture may be more effectively promoted overseas by the BBC, British Council, and the Central Office of Information.

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